

THE MAGAZINE DESIGNED FOR ALL RAILROAD HOBBYISTS



THE AUSTRALASIAN

MODEL RAILROAD

MAGAZINE

Registered at the G.P.O. Sydney for
transmission by post as a periodical

Incorporating "THE BOOSTER"

Price: 2/6

Single Copy

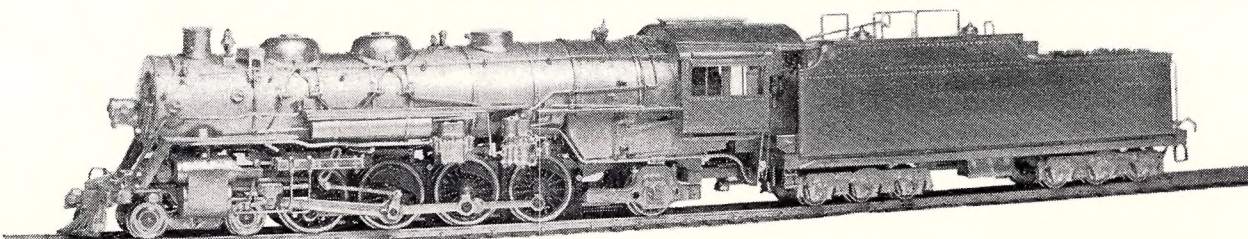
DEC. 1964/JAN. 1965

10/- p.a. to Members of S.C.R.
of N.M.R.A.

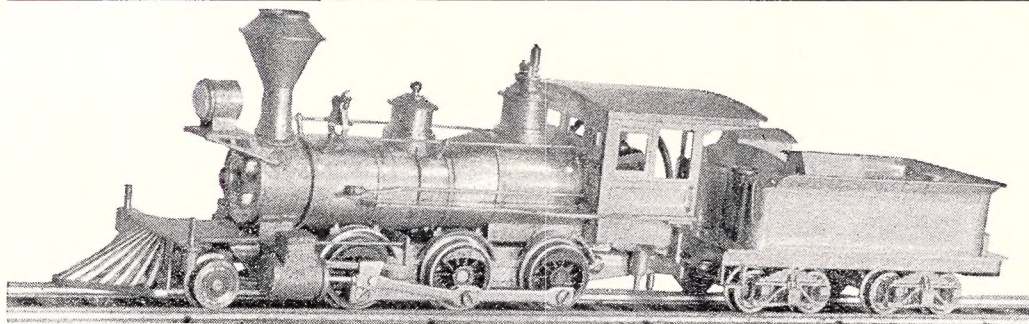
**May we wish you
a Happy Xmas
and Prosperous New Year**



THREE BRAND NEW ITEMS OF MOTIVE POWER FROM KUMATA...



HO SANTA FE 4-8-2 "MOUNTAIN" LOCO & TENDER: Undoubtedly one of Kumata's finest products. Equipped with fully sprung mainframe and detailed in "lost wax" castings. Unpainted, ready to run. Price: £37/10/0.



HO BALDWIN 0-4-0 STEAM MOTOR: The "enclosed engine" field was a specialty of Baldwin and, just as Sydney Tramways operated the world's largest fleet of Baldwin steam motors, so steam "dummies" became a favourite for logging, branch and industrial service, after electrification ousted the "motor" from street tramways. Unpainted, ready to run. Price: £7/12/6. Available early 1965.

HO N3 1890 PORTER MOGUL & TENDER: The first tender model for 3' gaugers with inside frames, the original Mogul will be a welcome addition to the narrow gauge loco. roster. Unpainted, ready to run. Price: £11.

Other News from "THE DOCKYARD"...

Perhaps the finest quality 'O' gauge rail ever offered in this country, the Vignoles section sheradised steel Rail, formerly manufactured by Rocket Precision Co., of England, has been greatly missed since the line was discontinued following the takeover of Rocket by Messrs. C.C.W. Productions. Now, however, with the co-operation of the latter, 'Dockyard' are to obtain a special production run for the benefit of 'O' enthusiasts in this country. Watch for further details soon... With the complete sell out of all 'O' gauge Erie Pacific and U.P. 'Big Boys', by the time this appears in print 'Dockyard' ready tracks will have received stocks of K.T.M. N.Y.C. J3a Class Hudson Loco. at £120, to be followed early 1965 by the Streamlined version at £125...

In HO, Floodlight Towers for yard illumination are now to hand in two models, both featuring lattice type masts of realistic dimensions. One, a four lamp model, is priced at 19/6 and the other, a two lamp model, is available at 15/6... Kumata have now delivered more of the popular HO 0-4-0 Plantation Tank at £4.17.6. Also the new HO N3 Rail Auto at 58/6.

From 'United' are more Sierra 2-6-6-2 at £43, Climax Loco. at £36.10-0 and Geared Tender to suit the latter at £5. Anticipated during December are more S.F. 4-8-4 at £40 and S.R. Pacific at £35, also our first stocks of USRA 2-8-2 at £35...

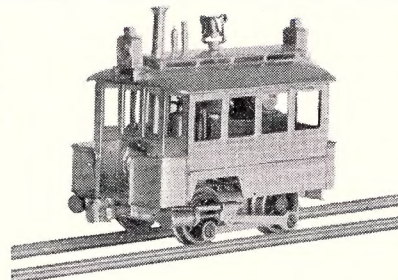
In the way of a special deal for this market and due entirely to over production for the U.S.A., Kumata have supplied stock of the N.Y.C. 4-4-0 'Buchanan' Loco. at but £14.10.0! As this model sold out some months ago at a much higher price — see your nearest stockist without delay... K's have supplied stock of Mark I and II Trac-

tion Motors at 62/6 and 53/6 each, respectively. Also more of their TT Disc Brass Wheels: 6, 8 and 10 mm. at 6d. each. Bored to take standard 00 Insul Axles which must be cut down for TT, these Wheels are also useful for many narrow gauge applications... From Rokal, in TT, are the new items: No. 01028, 2-10-2 Tank Loco. at £11.17.6; No. 01020, 0-6-0 Diesel Switcher at £6.15.6; No. 00321, Six-axle Depressed Centre Car at £2.3.0; No. 00317, Double-truck Hopper Car at £1.13.6 and No. 01232, Passenger Car with tail lamps at £2.8.0...

Shinohara have supplied further stock of their nickel silver range of Flexible Track, Points and Crossings. In addition, are new items: 19' Flexible Track with check rail at 10/6; No. 4 'Y' Switch at 18/6 and No. 4 Double Crossover at 49/3...

Suydam HO structure kits are to hand as follows: No. 7, Warehouse, 51/-; No. 70, Town Depot, 69/-; No. 83, Citrus Exchange, 39/-; No. 504, Station, 35/6; No. 522, Diesel House, 59/- and No. 566, Union Ice Co., 51/-... Gem/Olympia have supplied a token number of their finely detailed C. & O. 4-8-2 'Mountain' Loco. & Tender. Of super quality and equipped with large Vanderbilt tender, price is £48. Those interested should contact 'Dockyard' promptly whilst stocks remain...

Thanks to the demand accorded our new range of 'O' gauge 2 rail NMRA Drivers introduced some months ago, the following additional sizes are now 'in process' and will soon complete our range: 22mm. Spoked with small balance; 32mm. Spoked with large balance (small balance type already available); 32mm. Box Pok — both small and large balance; and 40mm. Box Pok — both small and large balance. As with existing stocks, these Drivers will come unmounted,

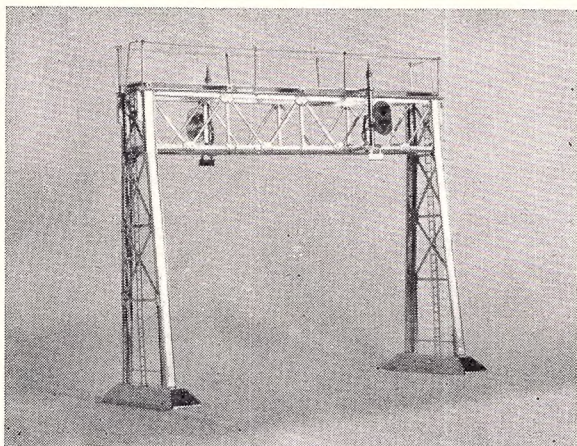


in pairs, with axle and complete with threaded shouldered crank pins. Prices will be announced soon...

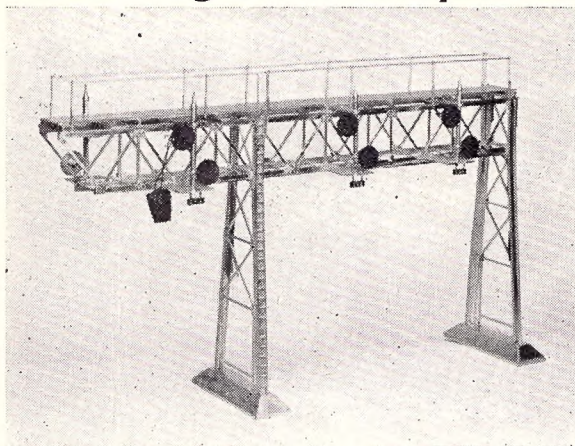
For those requiring a heavy duty power supply for an expanding layout, the Mainline Multi-tap Transformer, manufactured by 'Dockyard', features a 6 amp. capacity, with tapings of 6, 14 and 20 volts. An alternative model is also available offering tapings of 6, 16 and 22 volts, with a 5 amp. capacity. Either model at £8.10.0... HO traction fans are now offered the Kumata St. Louis Palace Car. Brass, unpainted, ready to run. A gift at £12.10.0...

All remaining stock of Gem OO nickel silver F/B. Points, Crossings and Flexible Track will be sold out at cost price: Universal and Scale 2 rail Points, 11/- each; Universal 3 rail Points, 11/- each; 2 and 3 rail Crossovers, 25/- each and 3 rail Flexible Track, 8/- per yard... From the U.S.A., new rolling stock indents include: Roundhouse Ore Cars, D.M. & I.R. and G.N., with rectangular sides, and G.N. and C.N.W. with tapered sides. All priced at 19/6 each. Roundhouse have also supplied their new 50' Plug Door Box Car, in U.P. herald, at 55/6. From Athearn, the Hi Fi F-7 Diesel units are now available in S.P. and U.P. heralds at 81/- each, whilst our GP-9 Diesel range has been increased with the addition of S.P. and Milwaukee Road models at 99/- each... Three new steam records have now been supplied by North Jersey Recordings: Steam in the High Country, Fast Freight on the Nickel Plate and Rods, Wheels and Whistles.

New Signals, Signal Bridges and Yard Floodlight Towers To Dress Your Right-of-way! . . .



2 TRACK SIGNAL BRIDGE

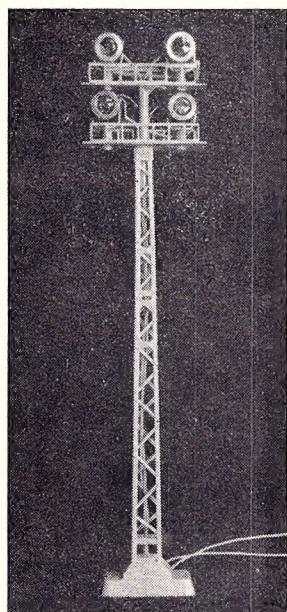


3 TRACK SIGNAL BRIDGE

COMING EARLY 1965: SIGNAL BRIDGES — FOR APPLICATIONS FROM ONE TO FOUR TRACKS.

Of brass manufacture, silver plated, these Signal Bridges comprise a range of four units, all of which may be optionally arranged for left or right hand running:

SINGLE TRACK CANTILEVER	76/6	THREE TRACK, AS ILLUSTRATED	165/-
DOUBLE TRACK, AS ILLUSTRATED	113/6	FOUR TRACK BRIDGE	190/-



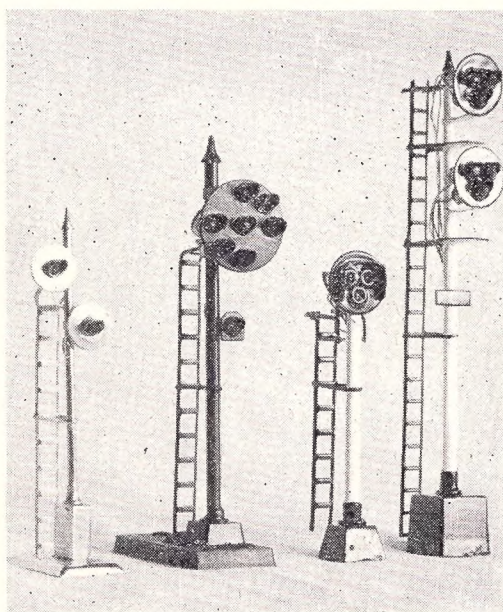
FLOODLIGHT TOWER

NOW AVAILABLE— FLOODLIGHT TOWERS:

Four Lamp Model	19/6
Two Lamp Model	15/6

COLOUR LIGHT SIGNALS
(Left to Right)

SG-7 2 Unit Searchlight	12/-
SG-4 8 Light Position	21/6
SG-5 Tri-Colour	11/-
SG-6 2 Unit Tri-Colour	21/6



SIGNALS

Other News from "THE DOCKYARD" . . . (Continued)

All priced at 76/- each... The rapid development of interest in HOn3 gauge is closely matched by a growing range of useful 3' gauge motive power, both small and reasonably large. In the latter class, a new model is the S.P. No. 9 'Slim Princess'. A 4-6-0 of interesting proportions and featuring

an unusual tank type tender. Keenly priced and yet well detailed, this unpainted brass model will be available about the time this appears in print at £22.10.0...

There are many other wonderful developments ahead for narrow gaugers, but also of immediate interest, Kumata will soon be

shipping Archbar, Bettendorf and Tender Trucks in HOn3 at 14/- per pair. —And to 'wrap it up' for this trip, there's a 'whisper' that a quantity of these Trucks may be going under some Australian prototype kits which our good friend Clive McTaggart presently has on his drawing board!

For Supplies, see your favourite stockist of 'Dockyard lines

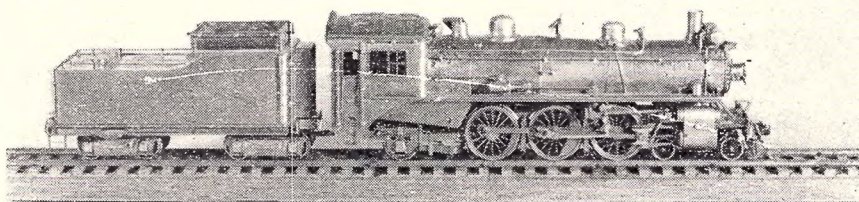
The MODEL DOCKYARD Pty. Ltd.

SOLE AGENT AND IMPORTER

216-218 SWANSTON STREET, MELBOURNE C.1.

32 3505

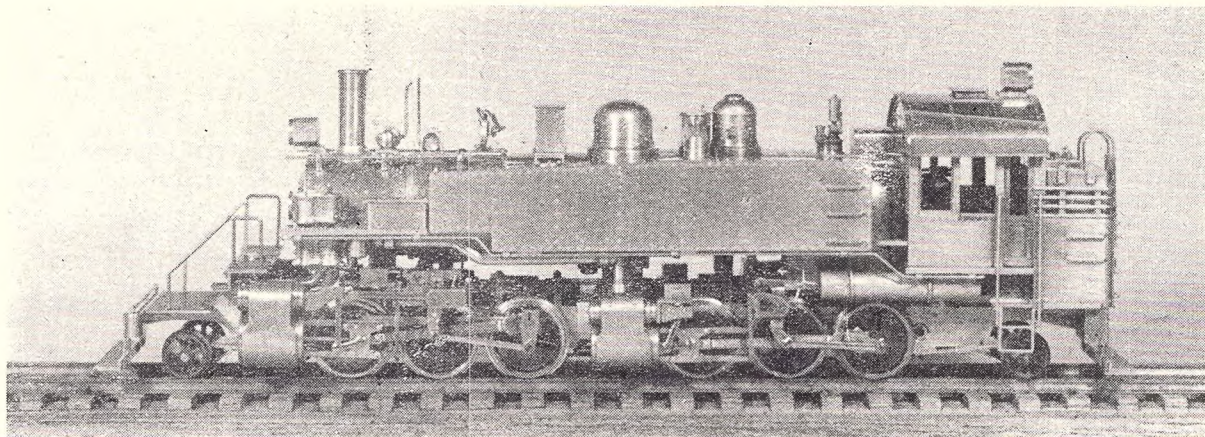
SPECIAL FOR CHRISTMAS



CANADIAN PACIFIC 4-6-2 LOCOMOTIVE.

ALL BRASS CONSTRUCTION. SPRUNG DRIVERS. USUAL PRICE £29/15/0.

Now only **£24/15/0**. This offer expires end of January, 1965.



RAYONER 2-6-6-2T LOGGING LOCOMOTIVE

ALL BRASS CONSTRUCTION. SPRUNG DRIVERS. POWERED ON ALL WHEELS.

Price **£37/10/0**, unpainted, ready to run.

Are you tired of that old brass loco and feel like something new? Trade it in and we will give you up to 1/3 off list price on any of our brass models. This applies to brass models only.

ALL MODELS ARE AVAILABLE ON OUR EASY LAY-BY SYSTEM.

SYDNEY MODEL RAILROAD SUPPLIES

4 Rees Avenue,
Belmore, N.S.W.

Postal Address:
Box 23, P.O., Belmore.

THE AUSTRALASIAN MODEL RAILROAD MAGAZINE

Vol. 1, No. 11, Dec. 1964/Jan. 1965

Incorporating **THE BOOSTER**

THE OFFICIAL JOURNAL OF THE SOUTHERN CROSS REGION OF N.M.R.A.

Also THE YARDMASTER, The Bulletin of the Sydney Model Railway Society.

AUSTRALIA'S LEADING MODEL RAILROAD MAGAZINE

CONTENTS

NEW ZEALAND'S ONLY MALLET, by William C. Fraser	Page 9
BUILD YOURSELF A CHG, by Chris Pratten	10
FOUR WHEEL REFRIGERATOR VAN, by Robert C. Harvey	10
DETAIL — Liven up your layout	12
THE SIDDALL SUPER-SUPER SEMAPHORE SIGNAL SYSTEM	13
A WOOD TRUSS BRIDGE IN HO, by Kel Mulhall	17
BLINKING LIGHTS FOR YOUR LEVEL CROSSINGS	18
N.Z. CLUB'S IDEAL CLUBHOUSE	19

REGULAR FEATURES:

On the Cover	5
Shop Window	6
The Scenic Route	14-15
Mail Bag	22
Club Car	23
Helper Service	26
The Market Place	26
Pass Exchange	26
Our Plan	inside back cover

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LATE ARRIVALS: DATA SHEETS

MEMBERS of N.M.R.A. will be able to purchase all past issues of the Data Sheets at a reduced price until the end of February. To allow for the time delay in receiving requests from overseas orders postmarked until the end of February will be honoured at the reduced prices.

The price is 25 cents per issue for Issues 1 thru the end and \$1.00 for Issues 1 thru 6 combined.

Send your orders, together with an International Money Order, for the correct amount, to: The Office Manager, Bob Bast, P.O. Box 1328, Sta. C, Canton, Ohio, 44708, U.S.A.

CONVENTION SET FOR EASTER

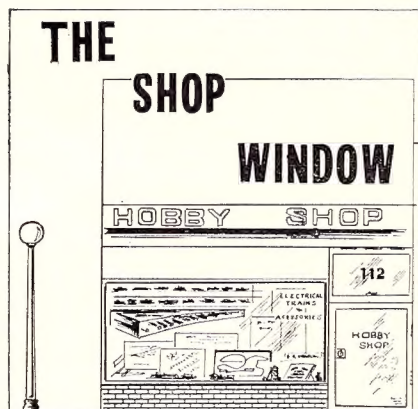
N.M.R.A. 1965 Convention Committee announces that Easter Saturday, Sunday and Monday have been chosen for the Convention in Melbourne. Program includes accommodation, layout visits, competitions, clinics, bull sessions, visits to Loco Museum, trip on Puffing Billy, Convention Dinner. Special cars will run on trains from Brisbane, Sydney and Adelaide. Register now with your Div. Rep.

CALENDAR AVAILABLE

We have recently received a copy of a calendar for 1965 which has been produced by the Auckland Metropolitan Model Railway Club. This consists of a cover and 12 pages each of which has an 8" x 6" black and white photo of a model railway scene or model. The photographs are good, reproduced on good paper and we feel every modeller should have one of them in his train room. Some of the scenes would be worth framing after the pages have been used. The calendar is available at 3/6 N.Z. a copy posted. Write, enclosing money order, to the Secretary, Auckland M.M.R. Club, P.O. Box 5883, Auckland, N.Z.

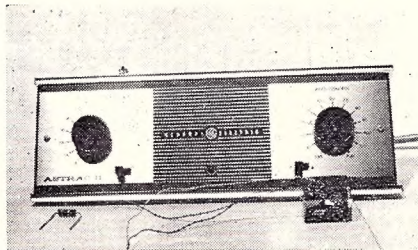
On the Cover...

Peter Gospel, of Glebe, N.S.W., stands at the controls of his New Testament Railroad. Peter, who is 9, exemplifies the hundreds of serious junior modellers now entering the hobby. This is a 6' x 3' layout which features 2 reverse loops.



Astrac Train Control

Manufacturer: General Electric Co., U.S.A.
Price: K2 or K4 — Two Controllers — One Channel, each £47.5.0 each; K5 — Single Controller with Five Channel Selector, £24.7.0 each; Micro receivers any channel, £7.10.0 each.



The name stands for Automatic Simultaneous Train Control and in the words of the maker, this is a giant step forward in model train control.

As I am not equipped technically to give you details of circuits, etc. I will confine this review to the fitting up and operation of test equipment loaned by the local distributor.

The following is a summary of its advantages.

1. Can operate up to five trains at one time on an electrically continuous track, with no block switches or gaps in rail.
2. Full voltage on track at all times means train lights and others connected to track remain alight at all times.
3. Easy to install, no complicated wiring needed.
4. Full control from creep to full speed.

Astrac consists of a controller which is plugged into the 240 volt AC. Make two connections from rear terminals to the track and a further two leads from 16 volt AC to track.

In addition to the controller it is necessary to fit a small receiver in each loco. A typical receiver is illustrated in front of the controller. It measures $1\frac{1}{2}'' \times 1\frac{1}{4}'' \times \frac{3}{8}''$ and is set in a flexible silicone rubber case which can be cut

down to $1\frac{1}{8}'' \times 1\frac{1}{8}'' \times \frac{3}{8}''$ if required. The receiver will fit in most tenders of reasonable size.

I tried all from a little slope back 0-4-0 camel back up to a Vanderbilt type of an SP 2-8-0. Also, a GP9 takes the receiver O.K. Full instructions as to motor hook up are included, plus a resistor to limit lamp voltage in the loco headlight to prevent blow out.

From tests it appears that best operation comes from 24 volt AC rather than 16 volt as recommended. This is generally true of most electronic devices I've found.

There are two models of controller. The one illustrated will control two trains simultaneously, i.e. Model K2 (Channel 1 and 5) or K4 (Channels 2 & 4). The other is the model K5 which is for flush panel mounting and controls any one of five trains one at a time. The receivers are available for five channels only, but more than five locos may be fitted by setting some in isolated blocks on the layout.

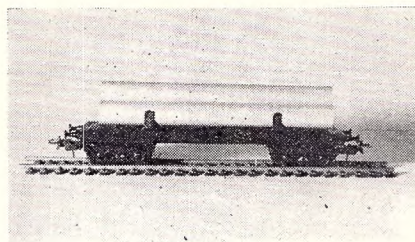
Operation is good with positive loco control at all speeds from creep to full ahead or reverse. Pulling, however, is above normal. Locos pulled more on my steep grades than ever before.

There are possibly new attachments in the wind for refinements such as braking and acceleration. Against this system, firstly is the heat problem. Not as bad as I first thought; guess I had never felt the armature of a motor after prolonged running before. Try it — it certainly gets hot! The motor gets even hotter with Astrac, but doesn't seem to do any harm. I read in overseas reviews that if styrene will melt against a motor then its too hot. Well, it didn't when I tried, therefore can't be too bad.

Secondly, you can't fit a receiver in all locos, particularly tank or the smaller type, with motor in tender, unless a waggon is permanently coupled up — not so hot really!

This still required a 240 volt to 24 volt AC transformer (no rectifier).

Remember, only locos fitted with receivers can be operated on an Astrac controlled layout.



Lima Flat Car with Load

Distributed by: Jones & Joseph Pty. Ltd., 32 Rosehill St., Redfern, N.S.W.

An all plastic flat car of European origin and design. As will be appreciated a flat car doesn't offer much scope for detailing. However, this car can boast

a well grained timber floor as a special feature.

The trucks are non-equalising plastic framed, and the wheels have couplers attached. These are of the Rivarossi type common in Europe.

Load consists of three concrete or steel pipes each 24"0" long. Wheels have only moderately deep flanges which pass through scale trackage O.K.

Length over buffers: 41"0".

Length of body: 36"9".

Width: 9"6".

Height over load: 11"6".

Truck wheelbase: 5"0".



7 inch Extended Play Record "Pichi Richi Pass"

Produced by: Rail Recording and Film Services, P.O. Box 95, Rydalmere, N.S.W.

Price: £1 each post free.

The setting is the old Central Australia Railway now run by the Commonwealth Railways in conjunction with the South Australian Railways.

This is a 3'6" narrow gauge steam line running from Quorn to Hawker.

The Locos featured are NM34 of the C.R. and T's 248 and 23 of the S.A.R.

Side one begins with NM34 and the unusual sound of the boiler being "Blown Down" as the engine passes. Follows the rhythmic beat of the loco approaching the pass.

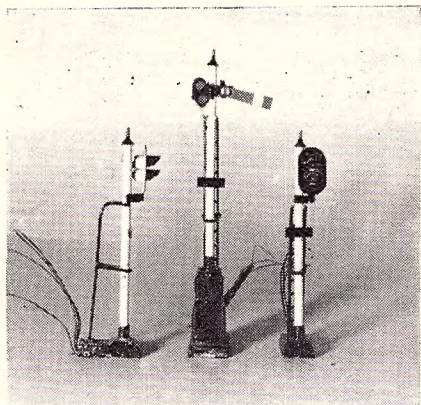
A very fine sequence is the squeal of tyres on the seven chain curves, stalling and finally pulling away. Finally, NM34 crosses the high iron bridge over Saltia Creek.

Side two opens on a 1 in 60 grade with a whistle in the distance, the sharp burst of exhaust and followed by the putt-putt of a motor trolley.

After arrival at Quorn the SAR 'T' class 248 backs on to train. Note the different compressor sounds of the two locos.

Finally, we hear T23 with a Garratt whistle leaving Peterborough with side sound of the level crossing bell, a fast run approaching Gumbowie with much whistle blowing.

This record is the only recording of the Pichi Richi Pathfinder in existence. Queenslanders note the QR C17 class is identical. Don't delay — post 20/- to J. Powe P.O. Box 95, Rydalmere, N.S.W. You won't be sorry.



Two-light and Semaphore Signals

Manufacturer: Kumata, Japan.

Price: Approximately 18/- to 25/-.

These signal standards are of all brass construction and of late have been on the scarce list. However, they will again appear on the Australian scene, so ask your nearest dealer to keep you posted.

Illustrated is the two-light block signal with a three light and possible others becoming available. The lights are fitted with grain of wheat lamps, red and green, ladder, number board and base. Size — 23'0" high; base 6'6"×3'6"; column 11" diam.; light head 4'9"×2'9".

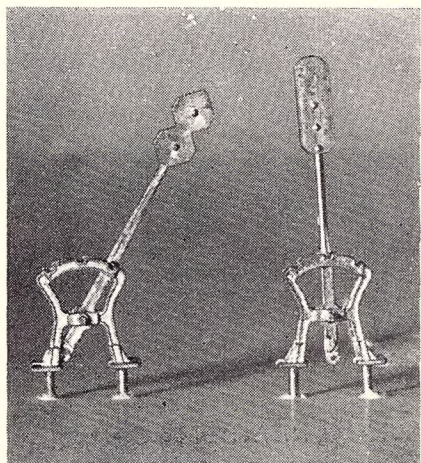
The semaphore signal is solenoid controlled, built into base with light in head to indicate setting. The prototype is US Southern Pacific. Rail actuating contacts are provided to power solenoid, as loco wheels make contact. Size — height 31'3", base 6'6"×4'0", height of control box base 8'6"; length of semaphore arm 5'0", column diam. 11".

Kemtron Harp Switch Stands

Manufacturer: Kemtron Product Co., U.S.A.

Price: 18/6 each.

This is, at first glance, an expensive piece of equipment especially for such a small job. But, believe me, for the period layout this will really set off the scene in any ward.



AN EFFICIENT POINT MOTOR

A good point motor should be easy to install and wire, have contacts for the routing of the propulsion current and be certain in operation. Such characteristics can be obtained with the machine described in this article.

This machine is operated by the ordinary post office or disposals relay both of which are fairly easy to get hold of these days. The kind to obtain is a relay that will work on the voltage you use, which in the author's case is 18 volts D.C., and having a resistance of about 200 ohms. These give plenty of power for the points, but don't use too much current, which is important, because the relays may be left on for long periods.

The number of contacts is immaterial, unless you are going in for a lot of circuiting — all that is needed usually is a set of single pole double throw contacts for the propulsion current.

Adjust the relay so that the armature (the part that moves the contacts) has the maximum amount of movement possible. Now make a mounting bracket and fit the relay under the baseboard at right angles to the track so that its armature is directly under the point. Drill a fairly large ($\frac{1}{4}$ " diam) hole under the tie rod of the point, and solder a spring wire operating rod onto the armature to come up through the hole and engage the hole in the tie rod.

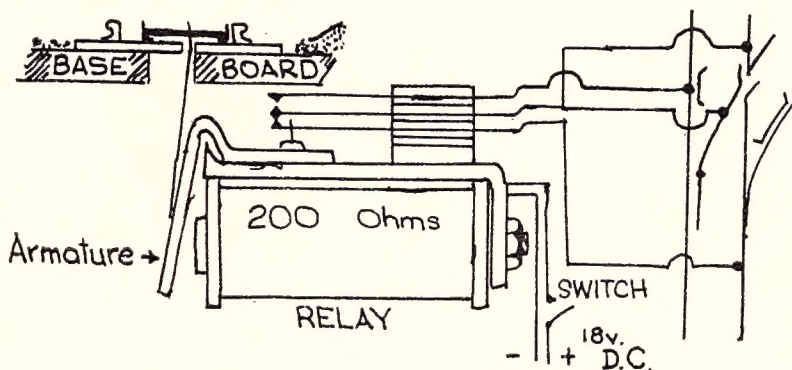
Now adjust this wire rod so that the point blades are in the normal direction of travel, then connect the current tem-

porarily to the relay, which will snap the point blades smartly to the other position. Check that the point returns to the normal position completely when the current is turned off, and if it does not, bend a spare contact to act as a return spring.

Wire the contacts for the propulsion current as shown in the diagram, which shows the point as seen from above, the straight track being the normal direction of travel. Do it now, or you'll never get it done!

All that is required on your control panel is a simple on-off switch for each point motor, and if desired these can be mounted directly on the track plan with the toggles showing the direction each point is set.

It is obvious that all points set in the "reverse" direction are using current, so it is important to get relays which don't use too much current, or you will overload your power supply. However, with the type mentioned, we have had about 24 points electrically operated without any ill effects, because of course they aren't all on at once, and when we got the habit of turning them off unless they were actually needed, there were hardly ever more than six on at any time.



They consist of two finely cast brass components, very strong, and finely detailed, requiring a minimum of clean up before the simple job of assembly.

Also supplied is a length of bronze wire to form a coupling rod plus support bearings for rodding. The throw bar has three positions governed by notches in the harp stand.

The two models represent the proto-

type of the C & S and DW & RG. The size of the stand is 8'0" high 2'9" wide × 1'0" with a throw of $\frac{1}{4}$ " maximum. Lugs on base provide firm fixing.

Loco Service Stand

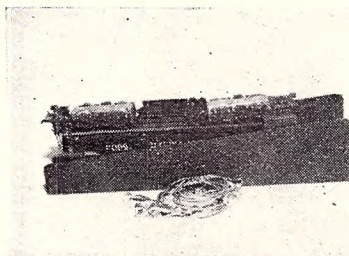
Supplied by: Sydney Model Railroad Supplies, Sydney.

Price: 22/6.

This is a simple but extremely useful item to help the modeller service a loco without damaging the delicate superstructure.

The unit consists of a tapered "U" shaped outer stand finished in black crackle finish. Inside are two metal brackets lined with foam rubber. They can be adjusted in length to suit the various loco lengths.

Also supplied are two leads fitted with spring clips each end for powering loco on stand.



HE SAID—

**"If it feels like treacle running down your spine . . .
and you can't get round to lick it off . . .**

you'll know you're in love, and it will feel the same whether it is love of a nice girl, a good book or a snorker horse . . . and he might have added "or a beautiful model!" Even after fourteen years handling Model Railway equipment, I can still thrill to sight of many items which come into my hands in the course of trade.

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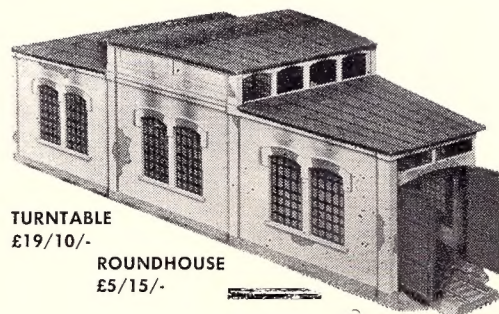
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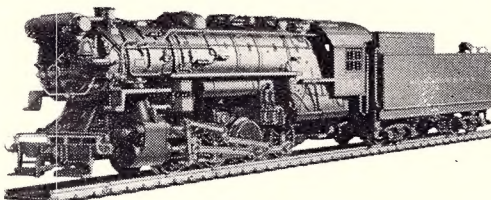
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◀ This fellow was mis-quoted last issue — please note.

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NEW ZEALAND'S ONLY MALLET

Imported from America in 1914, the "Mallet" locomotive shown here is the only compound semi-articulated engine to have run within New Zealand. Purchased by the Taupo Totara Timber Company the engine was used on that organisation's private railway between Putaruru and Mokai. The "Mallet" worked on that line until 1945, when the Putaruru-Kinleith section was taken over by the Government, and later added to the main N.Z.R. system.

After being used for a short period by the Government, the engine was left idle, and finally sold for scrap in 1956. With the decline in scrap metal however, prices fell away sharply, and it became possible for the New Zealand Railway Enthusiasts' Society to purchase the locomotive in September, 1958. After restoration work had been carried out by the society's experts, the engine was prominently displayed in the centre of Putaruru, where it can be seen today.

The "Mallet" is a 2-4-4-2 engine. Its two high-pressure cylinders (rear) are 10" diameter by 14" stroke, while the low-pressure ones are 16" diameter by 14" stroke. The engine's tractive effort was 10,500lbs, and with 56,000lbs (25 tons) weight on the driving wheels, the adhesion factor was 5.3. The total weight of the locomotive and tender was about 43 tons.

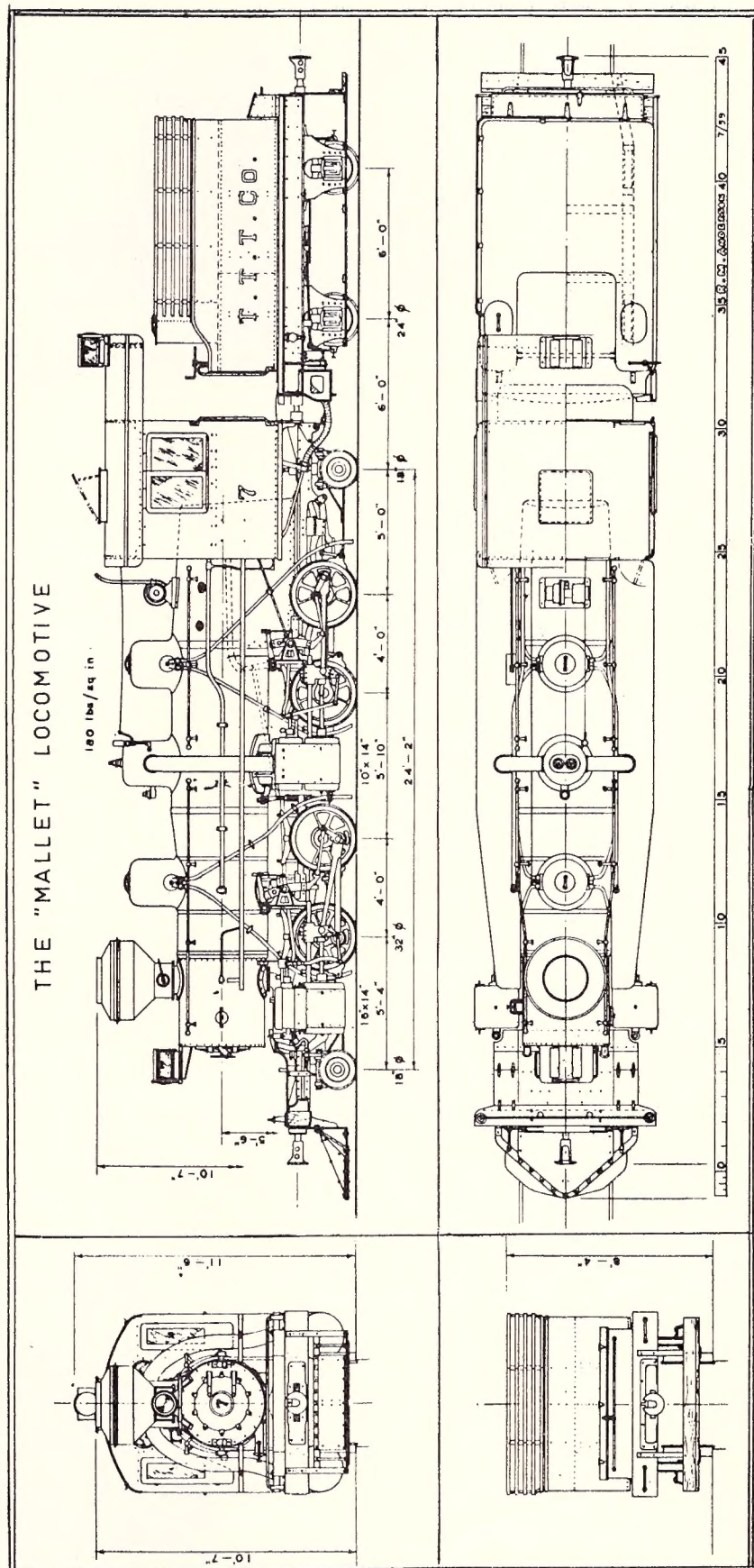
WILLIAM C. FRASER

A photograph of this locomotive appears on next page.

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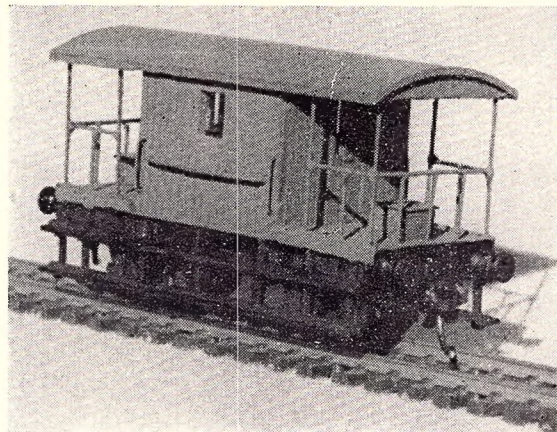
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BUILD YOURSELF A C.H.G.

A SIMPLE PIECE
OF KIT BUTCHERY

By
CHRIS PRATTEN



In a previous issue (June-July, 1963) I outlined how a Hornby-Dublo British Railways horsebox could be modified to provide a reasonable freelance bogie goods brakevan. Since then, my interest in NSWGR prototype has increased and my modelling improved a little, and I have added models of NSW HG, CHG, and LHG goods brakevans to my layout.

The tremendous variety and intensity of railway activity on the Northern Coalfield of NSW, centred on Newcastle, has always intrigued me, and I am in the process of installing a colliery on the layout to re-create in miniature (in about four square feet!) a little of this activity.

An essential part of the Newcastle coal traffic are the four wheel brakevans, code CHG, which are a familiar sight at the end of a string of LCH or private owner four wheel hoppers.

In the days before I became very NSWGR-minded I bought one or two Airfix plastic kits, and had made up their four wheel brakevan and a couple of cattle wagons. I used the floor and underframe of the former and a roof from the latter, plus a few other odds and ends, to make an acceptable CHG.

I used an O.B. Bolton blueprint of the CHG and my own photos to help me, but I assume that both a photo and outline drawing of the van could be obtained from the Department of Railways for a few shillings. These are well worth it, and make the task very much easier.

The Airfix roof is 5mm too long, but I didn't want to try and cut it so I adjusted my other work accordingly (scale-rule men read no further). After removing a section of Airfix floor to make it fit the complete roof, I was left with a wheelbase of 42mm instead of the 38.5 shown on the print.

I used Austral Modelcraft scribed wood for the walls and ends of the cabin, and the doors of the Airfix van, although having the wrong sort of windows, sufficed for the doors of the CHG. I glued the walls, ends and roof in place and filled the small holes in the Airfix floor with putty.

The sandboxes on each end of the platform are made from balsa blocks with

a card top. At first I thought these were seats for the guard in fine weather, but a more learned friend assures me they contain sand!

The railing from floor to roof at either end posed some problems as fine soldering of this nature is beyond me. However, I cut the head off some slender pins, heated them and stuck them into the plastic floor and roof while hot. The half-height railing was stuck to the uprights using Araldite and a lot of patience and self-control. When painted, the joins are very much less conspicuous than I have achieved with solder, and quite strong enough. The handrails in the wood sides are easily fashioned from wire and added in the position shown in the plan.

I replaced the plastic buffers with Fleet brass ones for added effect and the plastic wheels with 12mm Nuro metal wheels for better running. A Peco brass axle-bearing heated on the point of a file and thrust into each plastic axle-guard while hot makes a big improvement in the running possibilities.

I fitted my model with Kadec couplings and painted it dark grey, with black underframe. I am now anxious to add a set of LCH wooden hoppers to complete the coal scene.

N.S.W.G.R. 4-WHEEL REFRIGERATOR VAN

By Robert C. Harvey

For the construction of this van in "O" Gauge, it is suggested that the underframe, side solebars, and end headstocks be made from 26 Gauge brass sheet, the body and roof either also in brass, or in very thin plywood, as the builder wishes.

The floor of the van can be cut and folded in one piece incorporating both the solebars and the headstocks, to which it is quite an easy operation to solder the "W" axleguards, the Westinghouse Brake unit, buffers and drawgear. If the builder wishes to produce the complete van in brass, the whole is a matter of accurate cutting out and very neat soldering, afterwards cleaning out all corners and exterior work of excess solder with a very sharp scraper, preferably made from a small flat file ground sharp.

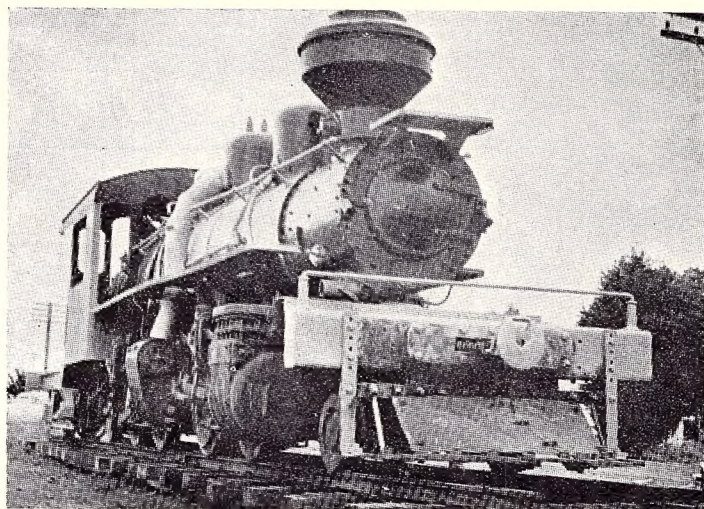
The sides and ends, whether made of wood or metal, must be accurately scribed to represent the wooden boarding, from sole bar up to letter boards, which in full-size is only a shading outside sheath, with air cavities between it and the heavy sides proper.

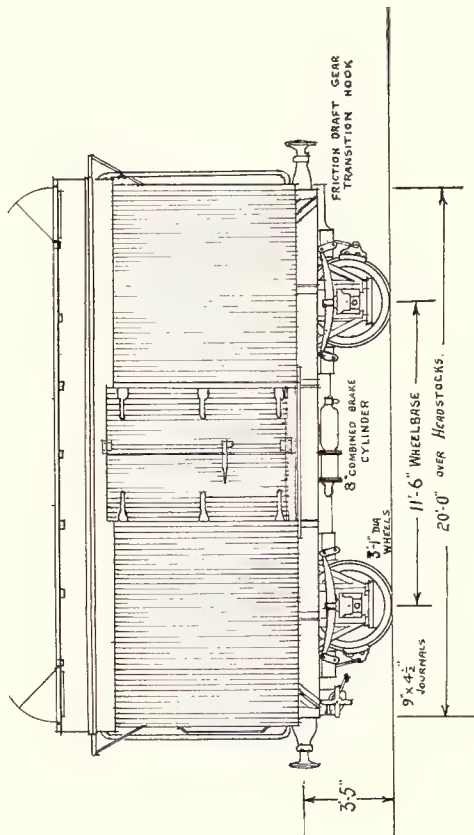
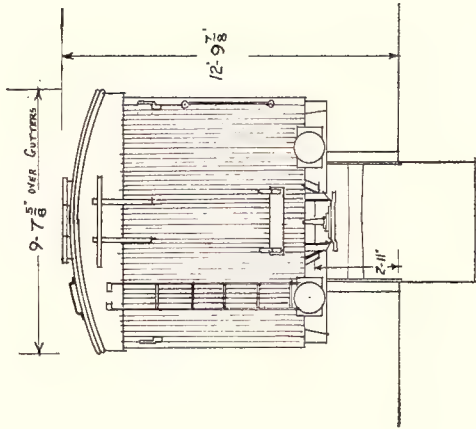
Wheels on axles, "W" axleguards, Buffers, Westinghouse brake unit, and ladders, are all available commercially in both Sydney and Melbourne in "O" Gauge, making the job much easier for the amateur builder.

Side loading doors on each side open outwards, and if made to open in the model, on neat hinges, it greatly adds appeal to anyone admiring the model.

Finally the colour layout on the full-size van is — Sides and ends from solebar to roof level in White, Roof top in Grey, all undergear in Black, together with buffers, ladders, lamp irons, and end platforms.

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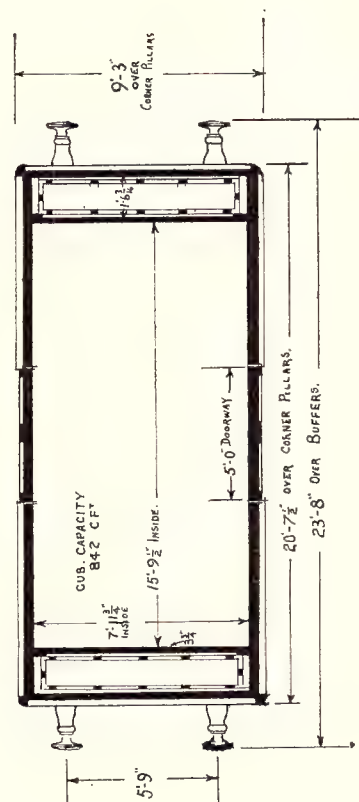
SCALE 7MM = 1 FOOT.

FULL SIZE FOR "O" GAUGE.

DRAWN R.C.H. S.C.R. PUBLICATIONS

DATE 11-1964 PLAN & PRINT

SERVICE.



DETAIL

Everybody, everyday sees some little scene or occurrence which is common and could easily be fitted into the average layout. Many of the details can be shaped up quickly and easily from scrap card, balsa, wire etc., while others can incorporate commercial parts. No great skill is needed and after you have tired of the scene it can be readily dismantled and the bits used in some other place.

Let's have a look at a dozen or so of these items and the materials which could be used.

BILL BROWN SHIFTS INTO HIS NEW HOUSE

First of all a furniture van (Matchbox) is parked in the drive. Bill and Mrs. Bill, the two kids, and the cartage contractors (Airfix, Slaters, Merten, or Faller figures would provide suitable characters) are all in view — the two contractors are carrying in a heavy trunk (Merit or suitably painted balsa with card straps), Bill is burdened with a roll of lino (card or typing paper), the two kids each have a suitcase (Merit or balsa again) and Mrs. Bill directs operations from the front steps.

Bill's car is on the road outside and dotted around the lawn are various items of furniture, etc. — more balsa trunks and suitcases, a balsa, plasticine or card piano, a couple more rolls of lino, two bicycles (Merit) two wirewoves (balsa frame with mesh or piece of old stocking glued thereon) some chairs, a sideboard, a set of bunks, a table, a toolbox and a couple of packing cases (all made from scraps of wire, card, balsa, plasticine, etc.).

Mrs. Snoot (the nosy next door neighbour) peers out her front door while her two kids watch from the street, squatting on their Merit bicycles. Get the general idea — you can have a couple of evenings' enjoyment at little cost — let your imagination run riot!

NAR THEN, NAR THEN — WOTSA GOIN' ON 'ERE!

(P.C.59 investigates a road accident)

Joe Blow failed to give way to his right and knocked poor old Hec Thomas off his bike and broke his leg. One Matchbox car and 1 Merit bike (both suitably mangled), 1 P.C.59, 1 Joe Blow, 1 Ambulance driver, 1 Hec Thomas, 6 "rubber-neckers" (all commercial figures), 1 Matchbox Ambulance, 3 other parked Matchbox cars, 1 Matchbox wrecker truck, 1 pool of blood, (small, red paint), 1 stretcher (wire and paper) — display suitably and hey presto another easily made, eye cathing bit of detail.

ROAD REPAIRS

The Council finished sealing the new road on Tuesday and now it's Wednesday morning and Bill Spence and his gang have opened it up again to put in a gas main. Required — 1 Matchbox light van for Bill, 1 Merit Bill Spence, 3 Merit workmen, one toolshed or toolcart (card, wire, etc.), one open trench (a $\frac{3}{4}$ " wide by $\frac{3}{4}$ " deep "trough" gouged three parts of the way across your road) excavated spoil alongside the trench (fine sawdust, plaster, sand, etc.) a few picks, shovels, etc. (card, wire, etc.) laying about, some card bar-

riers, suitable signs and a Matchbox or Dublo front end loader or tractor, and, of course, the inevitable billy boiling. For this last item use a few fine slivers of matchstick painted black, a wire support for the billy itself and put a small red bulb in the middle of the fire — suitably wired up it will be the pièce de résistance.

TOM JONES ON HOLIDAY AT THE BEACH (or elsewhere)

Tom has a large family so he has both a caravan (Matchbox) and a tent (carved from a lump or balsa with wire guy ropes). Parked hereby is his Matchbox car and lying underneath can just be seen Rover the faithful family (Merit) hound. Tom (Merten) is reclining in a deck chair (balsa and coloured card) reading a book (card). He is shaded by an umbrella (large drawing pin — painted) and has alongside a small table (card or balsa) on which stands a radio and two bottles of beer (balsa) and a glass (short piece of coloured straw).

Mrs. Tom has hung some towels (card) out to dry on a line (cotton) strung between the tent and the caravan. Mrs. Tom and the kids (Merten) are in their togs and are just about to go for a swim — Eric, the youngest son, has a car tube (circle of black string) hung over his arm (he can't swim too well you know) and his brother Joe is pulling along on a length of cotton a small wooden boat (balsa scrap) Tom made for him. Go on, you take it from there — you've all been camping.

HORI & THE SHEEP (or Cows)

Hori is shifting his sheep along a back country road. This is a common enough scene on these roads and is very easy to duplicate. All you need is 1 Hori (Merit repainted), 2 Merit horses (one with a balsa pack aboard) several Merit dogs and say 20 or 30 sheep or more if you have room. Perhaps if it is a narrow road you could make it more interesting by placing a small car in the middle of the sheep heading in the opposite direction with an irate driver leaning out of the window.

A RUBBISH DUMP

Now here's where you can really let yourself go — you can keep adding bits year by year and if it is made as a lift-out section you can use it again on successive layouts. What to put in it? Well, as a starter here's a few suggestions — An old plastic car or chassis (or two), old tree stumps and branches (wire), a pool or two of water (varnish), an old bath (painted foil formed around a carved

Do you know what makes one layout in a dozen or so stand out? Yes, it's the little bits and pieces (well-detailed scenes) than can be seen here and there.

No doubt you have admired the skill of the modeller and thought "I could never do that". Of course, you can!

balsa block), old tins (short bits of painted grass stalks, old Biro refills, tube, etc., will do), old rusty corrugated iron (formed tin foil), a couple of old water tanks (dowel or tin foil), old bicycles (Merit or wire), car tyres, (card or small circles of black string), old doors and windows (card), and so on.

The possibilities are endless, so use your loaf. Apply plenty of rust (paint), weeds (bits of toothbrush bristles, teased string, moss, etc.), heaps of soil (sawdust, plaster, etc.) and generally work up to any untidy but realistic mess. Plenty of paper (card) scattered about as if windblown will help too and don't forget the signs "DUMP NO RUBBISH", "THIS IS NOT A RUBBISH DUMP", "OFFENDERS PROSECUTED", "KEEP OUT". A couple of Merit figures with a Matchbox car and trailer busily unloading rubbish right alongside one of the signs would probably be authentic as would a broken down post and wire or paling fence (card, cotton & balsa). Lastly, leave the gate open!

BOY'S TREE HUT

When you were young you no doubt built a tree hut where you whiled away many a pleasant hour with your mates. Even today there are dozens of them to be seen in trees around Hamilton but I've never seen one on a layout. Why not, they are so-o-o easy to make.

Let's see now — first of all a suitable tree is needed (a twig, twisted wire or what-have-you) then the hut can be "roughed up" (I mean that) from card, plastic or balsa with perhaps a tin foil roof, a card walkway outside, a cotton ladder hanging down, a flag pole from balsa, and a skull and crossbones flag from card. Oh yes, a couple of boyish signs ("KEEP OUT, TRESPASSERS SHOT ON SIGHT") or such other friendly notices as occur to you will be needed also.

YOUNG BILL, THE FISHERMAN

Young Bill and his mate Fred have gone down to the creek to catch some eels. An easy scene, all that is needed is a couple of Merit or Slater's boys, a cotton line, a bicycle lying nearby, two or three eels (plasticine, card or string) and a tin (short piece or small bore tube) of worms on the bank beside Bill.

MRS. PLONK ENTERTAINS AT TENNIS

The old duck has a nice Airfix house and at the rear a tennis court where on Sundays she entertains a select group of friends. The tennis court can be either

grass (felt) or asphalt (painted plaster) with painted lines, a wire netting fence (wire and mesh netting from your wife's old hat), a net (from the same source) some Slaters, Airfix or Merten players with racquets (wire), Mrs. Plonk and her friends (also Slaters, etc.) sitting on card seats at tables (small flat drawing pins) under umbrellas (large round headed drawing pins). A few Matchbox cars parked in the drive and there you have Sunday afternoon at the Plonk's.

BOWLS, WHAT A LOT OF BALLS

Old Bill Plonk doesn't like his wife's tonky friends so after locking away his grog, he goes down to the green with his mates for a pleasant game of bowls.

The green is, of course, some rich green felt with a narrow ditch all around and behind this a raised border — suitable commercial figures repainted to represent "creams" form the players — the bowling mats are paper or card painted light brown — the bowls can be small ball bearings (5/64") dipped in dark brown paint with a smaller one (white), for the "Kitty".

The clubhouse is a small card structure with a toolshed alongside. Standing outside this is a roller (dowel, wire, card) and a collection of buckets (tube and wire) rakes, shovels, etc. (wire) together with a couple of heaps of lawn clippings (card cones sprinkled with finely ground and dyed shavings from the office pencil sharpener). Bill and his friends all have bowl bags (plasticine or brown balsa carvings) and their cars are parked on the street outside. Don't forget a sign over the gate or on the clubhouse roof — WHITORA BOWLING CLUB — and of course a nicely clipped hedge (plastic foam) around the property. Now stand back and admire it, aren't you pleased with that little scene?

I. FLOGGEM, THE AUCTIONEER

Old Ikey, has had his auction mart in the same place for the last 35 years and has done very little tidying up in the whole time.

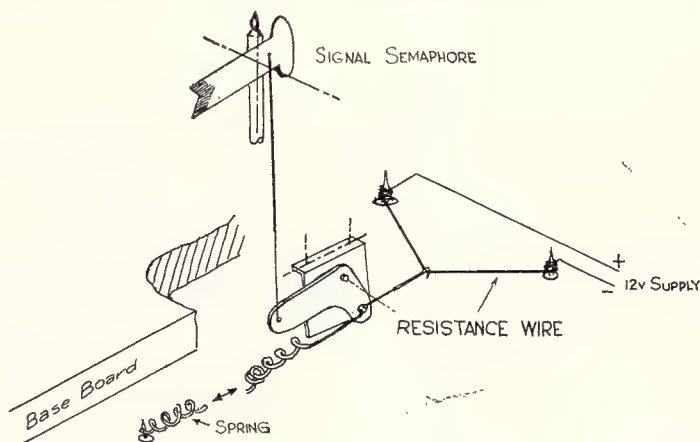
The auction mart building is, we'll assume, already in place, suitably equipped with appropriate signs and a ramshackle corrugated iron fence on the boundaries. Out in the back yard is Ikey's junk, pardon me, bargain area. Here can be seen piles of old corrugated iron (tin foil), a few baths upside down (painted carved balsa), some windows and doors (from Airfix kits or card maybe?), an old stove or two (moulded plasticine), an old car (plastic), a few ladders (card or balsa), some packing cases (card), some reinforcing steel (bent fuse wire), a couple of old dog kennels (card) and so on and so on.

Plenty of rust (paint) plenty of weeds, and Ikey's old truck (Matchbox suitably doctored) parked in the middle will help to give the impression of a thriving business — gone downhill!

Well, there you have it, a few basic ideas and the rest is up to your inventive mind — you can go as far as you like — just remember — the clutter is the clincher!

—(Reprinted from "The Footplate" the journal of the Hamilton Model Railroaders.)

The Siddall Super-Super Semaphore Signal System



This method of operating semaphore signals gives slow, realistic movement with a very simple mechanism, which uses the expansion of a piece of resistance wire to move the blade.

The parts required are: 1. Angle crank pivoted to a base plate for mounting below baseboard. 2. Operating rod of spring steel wire. 3. Length of resistance wire. 4. Spring. 5. Terminal lugs and screws. 6. Copper wire for connecting link.

ASSEMBLY: Drill a hole in baseboard for operating rod, and mount your signal above it. Install operating rod on signal, making sure it can move through the hole in the baseboard freely.

Take the angle crank assembly, and bend the base at right angles away from the crank along the scribed line. Mount this in position under the baseboard, so that the small hole in the longer arm of the crank is in line with the operating rod. Now bend the rod at right angles, cut off short and thread through hole in the crank, and turn up the end so it can't slip out. Operation is best if the arm of the crank is level when the signal blade is half-way through its stroke.

Hook the spring on to the short end of the crank and fix it to the baseboard with a brad so that it just pulls the signal to the "all clear" position.

Drive two screws part way into the baseboard, with a lug and washer on each, so that the resistance wire can be stretched between them so as to pass about 1½" from the crank, on the side away from the spring; screws to be 7" on each side of the crank (14" apart).

Bare the ends of the wire, being very careful not to kink or break it, and twist round the screws, tightening them to hold it stretched fairly tautly.

Make a connector from copper wire to hook from the small arm of the crank to the resistance wire, adjusting so that it just pulls the signal to the "stop" position when hooked over the resistance wire.

Connect your 12 volt power supply to the lugs, and the signal will move realistically to the "all clear" position, to fall to "stop" again when the power is cut off. An on-off switch on your control panel is all that is required.

ADJUSTMENTS: If the action is too slow — shorten the resistance wire by moving the screws slightly, not more than an inch or so.

To bare the wire — stroke lightly with a sharp knife until the insulation frays, or else burn it off in a match flame.

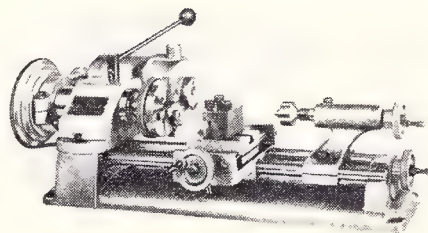
The stroke is speeded up if all the insulation is stripped from the wire.

It may be easier to mount the crank and wire on a separate baseboard which can be fastened in place after being adjusted.

It is possible to use one screw only, with the wire stretched straight out from the crank, but this method only gives a small movement, which may not suit all types of signal.

(Reprinted from the Sept. 1962 Booster)

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CORRECTION

With reference to article on lever keys in October/November issue, last paragraph should read — Locking type lever keys may be used for any of these functions.



ABOVE: Black Rock township and railway station at night. A realistic scene on David Beck's Ruddimyth and Farrago Railroad at Spotswood, Victoria.



TOP CENTRE: A curved timber trestle plus a loaded freight train. Both scenes are again to be found on David Beck's layout. Below is a steep grade pulling a full consist of freight. A well put Victoria", a club layout belonging to the Bendigo model R

BELOW: John Parker, of Bass Hill, N.S.W., a new subscriber, took this close up with a close up lens attachment on his camera. Very good for a first effort, more please John.





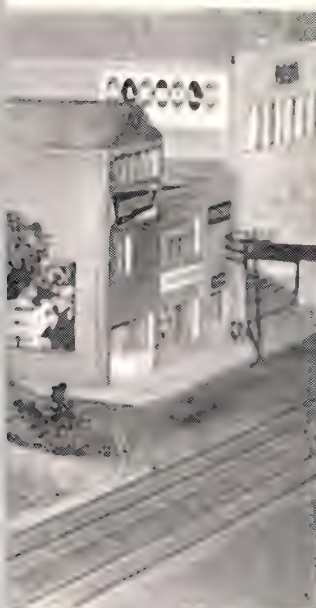
TOP RIGHT: "Keelwong" Boremore, N.S.W. is the locale, Chris. Pratten the builder. The loco is a C36 coupled to a MHG Brake Van and shunting three RU bulk wheat trucks into the silo siding.

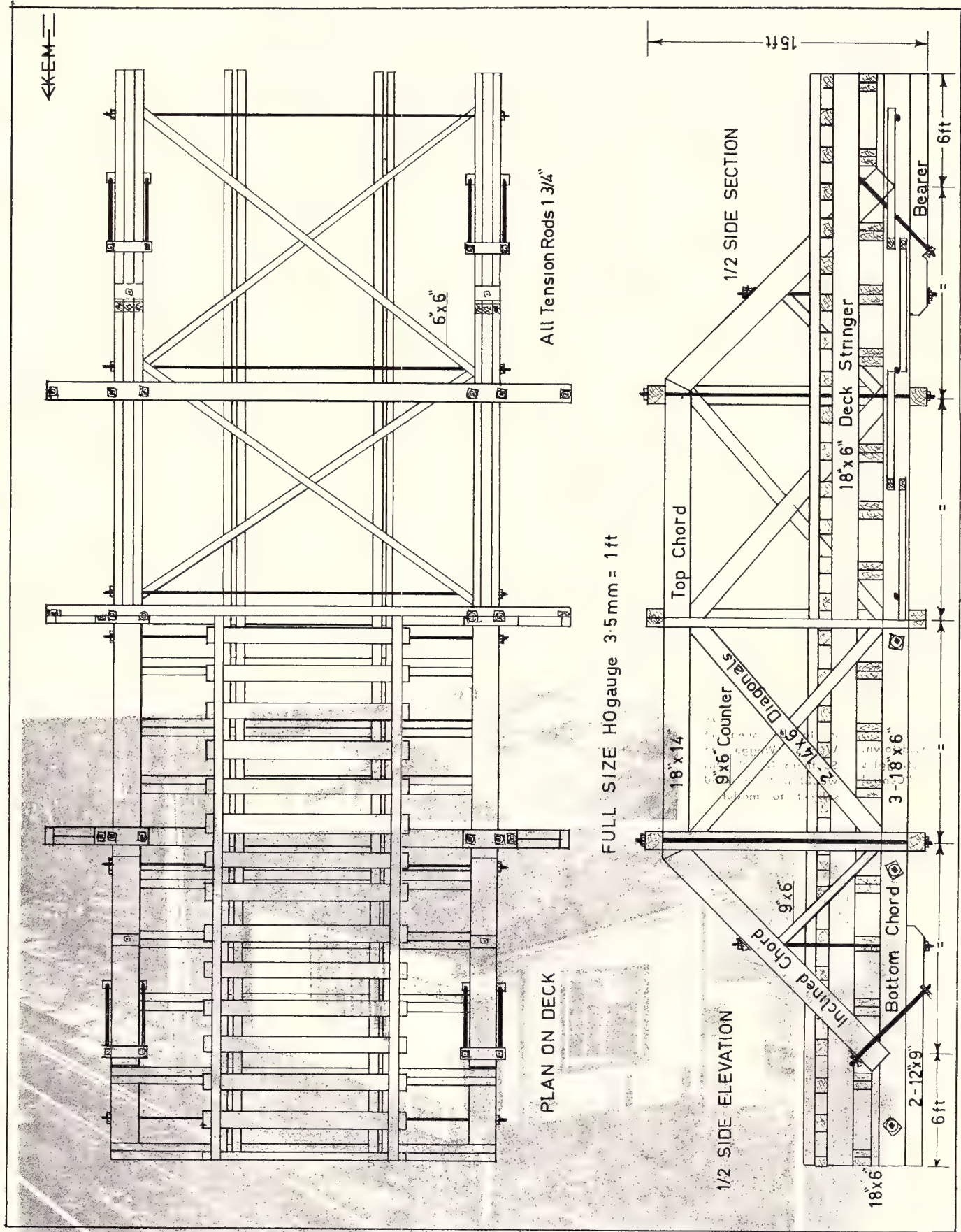
CENTRE RIGHT: Ron Ervin, of Bendigo, built this layout as part of a display by the local Bendigo model Railroad Club.

BOTTOM RIGHT: This unusual signal box is to be seen at Wagga Wagga in Southern N.S.W. This would make a good subject to model.



is a fine photo. Notice loco depot at Davidstown. A ten wheeler struggles over scene on the "Central"ers, Victoria.





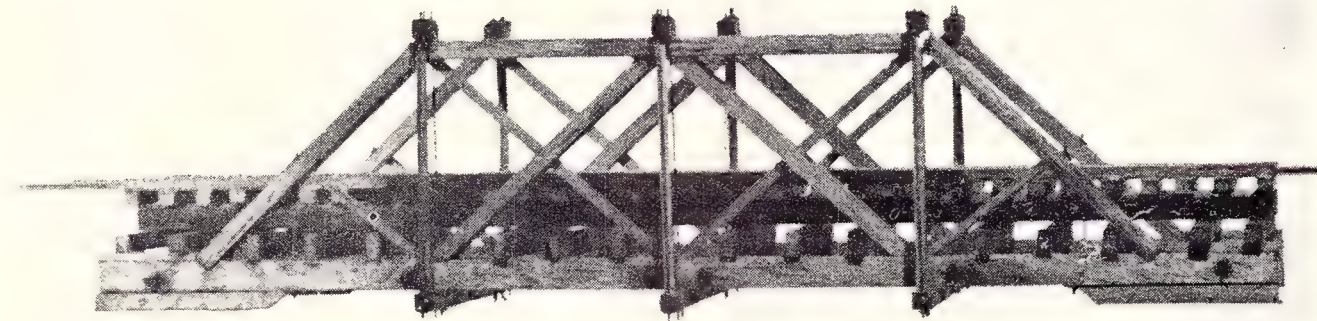
A WOOD TRUSS BRIDGE IN HO

By KEL MULHALL

During the 1860-70 period this type of bridge was constructed primarily to allow the rapid progress of track laying over streams and small rivers. However, due to relatively short life of this type it had to be replaced by a more permanent structure such as a steel plate girder bridge.

ITEMS REQUIRED

- (1) Balsa stripper
- (2) Razor saw
- (3) Sharp knife
- (4) Hand drill & No. 72 drill bit
- (5) Combination pliers
- (6) Pliobond & Aquadhere glues
- (7) 24 gauge copper wire
- (8) .005 shim brass.



The terrain on my layout necessitated the construction of this form of bridge which had to be approximately 60'-70' in length. This bridge is only 65' long, although extra panels can be added to extend its length. Remember, however, that all panels must be the same size and, that the overall length of it must not exceed 90'. The bridge timbers vary from 6" x 6" to 14" x 18" in size.

My bridge was built up from balsa and obechi, although I recommend scale lumber (e.g. Suydam or North Eastern).

Now is the time to decide whether one is going to stain or paint the timbers before assembly or spray the completed bridge. I chose the latter method.

Pin a piece of waxed paper over the plan to protect your magazine during construction.

If you take your time you will not only have hours of enjoyment but have a nice model to show for your trouble. Now to work.

SIDE TRUSSES (RIGHT HAND SIDE)

Start by cutting three 18" x 16" bottom chords to length and notch each end to facilitate the inclined chords. Drill a hole in each of the tension rod centres.

Cut the two inclined chords and top chord to size from 18" x 14" timber. Place all of these pieces on to the drawings after they have been glued together.

Cut two diagonal braces from 14" x 6" timber and one counter diagonal brace from 9" x 6" timber. Glue these pieces on to the bottom and top chords. Alternating these braces (i.e. 14" x 6" - 9" x 6" - 14" x 6") completes the first panel and

all succeeding panels are assembled similarly.

Cut two (18" x 6") butts and glue on to the top of the bottom chord, resting against the inclined chords.

Cut out several 6" (round or square) washers from .005 shim brass and drill in the centre with a No. 72 drill. Affix these into position with Pliobond.

Cut two (12" x 9") bearers and glue to the underside of the bottom chord.

Take two (9" x 6") counter diagonals and glue one at each end as shown.

This completes this side and the remaining side is only a duplication of what you have already completed.

DECK

The deck is comprised of four (18" x 6") stringers which are positioned beneath the sleepers directly under the rails.

Place the stringers on the drawings and glue sleepers (10" x 10") at 24" centres along them.

Cut two (6" x 8") guard rails and glue them on the sleepers, 4" 6" either side of the track centre.

DECK SUPPORTS

Take the two side trusses and position them on to the plan.

Cut 24 (18" x 6") and eight (6" x 12") deck support timbers. Group the (18" x 6") D.S.T. into pairs and glue them into position on top of the bottom chord.

The 6" x 12" D.S.T. are glued in a similar fashion outside the inclined chords.

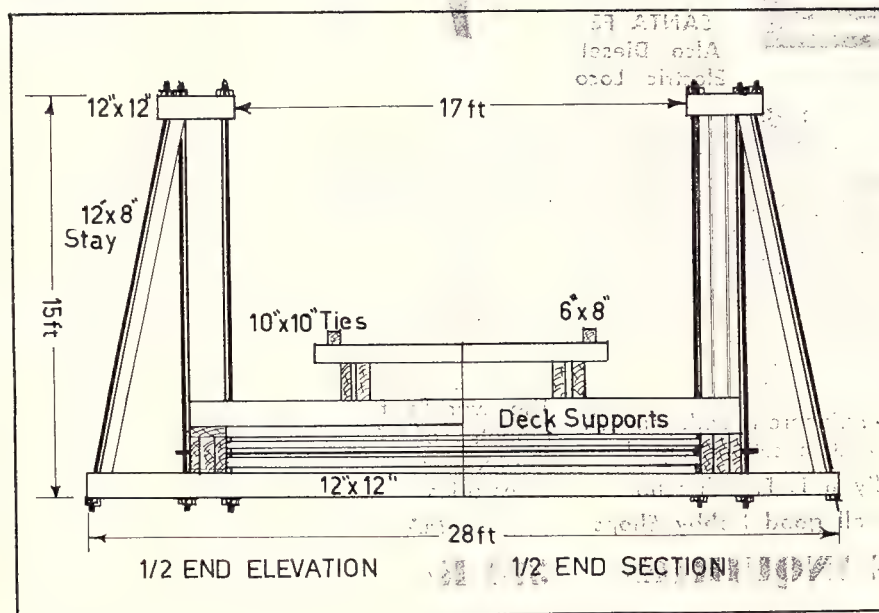
Cut six (12" x 12") straining beams into 3' lengths and position them on top of the top chord. Glue three 6" washers on to each one.

After the glue has set take bridge and insert eight (6" x 6") diagonal stays as shown in the drawings.

Cut three (12" x 12") beams into 28" lengths and glue to the underneath of the bottom chord so that they are directly below the straining beam blocks on the top chord.

Glue on six (12" x 8") diagonal bracing.

Fasten track on to the sleepers gauging accurately.



TRUSS BRIDGE (Cont.)

Glue deck onto the deck supports making sure that the deck is correctly centred.

TENSION RODS

Cut six tension and tie rods allowing 2"-3" overhang and push them through the pre-drilled holes in the bottom chords.

Fasten one end of the tension rod into a vise and grasp the other end with a pair of pliers and pull steadily. This will give the wire a straight tension and touch each end with a small amount of solder. Cut off excess wire leaving 1/16" protruding.

The same method is used for installing the vertical tension rods.

Cut eight (9" x 2'6") plates (.005 shim brass) and drill a hole in each end. Push short lengths of wires into the holes and fasten to the ends of trusses.

PAINTING

Hand painting a bridge of this type with a hand brush would be a nightmare, but not an impossibility. I chose to spray paint my model with Lamp Black, Flake White and Van Dyke Brown artists' colours. These were well thinned with turpentine and mixed to the desired colours.

The cost of building this model can be quite cheap. However, with the use of items such as scale timbers and Kemtron nuts, bolts and washers the model can be greatly improved without being "over-expensive".

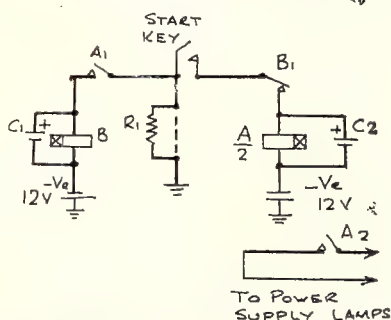
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Resistor R1 may be included to vary the length of time of flashing. Suggested values 100 to 1000 ohms, but once again

CIRCUIT FOR BLINKING LIGHTS AT LEVEL CROSSINGS



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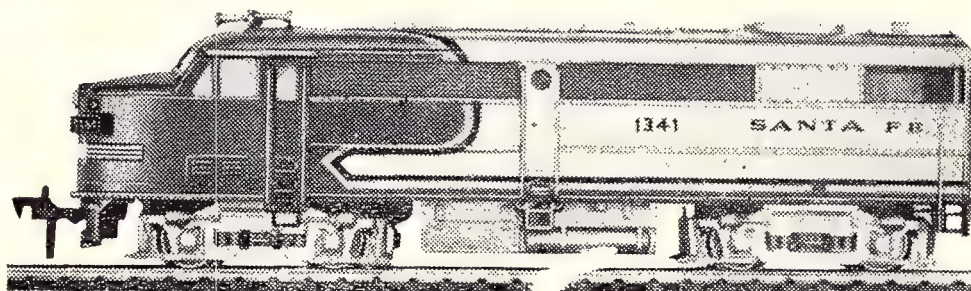
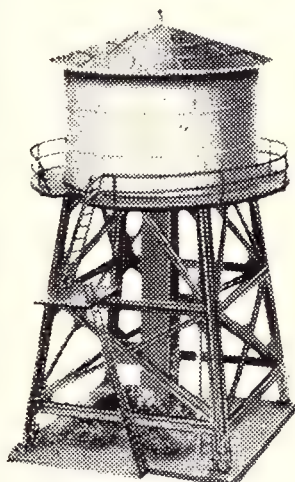
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N.Z. CLUB'S IDEAL CLUBHOUSE

What more suitable place for a model railway club's layout than in a prototype railway coach? Hamilton Model Railroaders have just this site for their clubroom and layout in the town of Hamilton, New Zealand. Les Street, former president of the club and editor of *The Footplate*, its journal, sends us the following description of the model railway they have constructed.

The layout is situated in one end of the coach, the meeting room occupying the other end. As you open the door into the layout end you see on your left and again on your right the two control panel operator's boxes about 3 feet in depth. Stretching ahead of your gaze is the layout occupying an area some 23 feet by 7 feet with a spectator's aisle stretching some 15 feet up the centre. It is HO-OO gauge (16.5 mm) but has been built to allow clearances for 3/16" scale so that HO, OO and Sn 3½ followers can run their stock whether they be of English, Continental, Italian, U.S. or N.Z.R. prototypes.

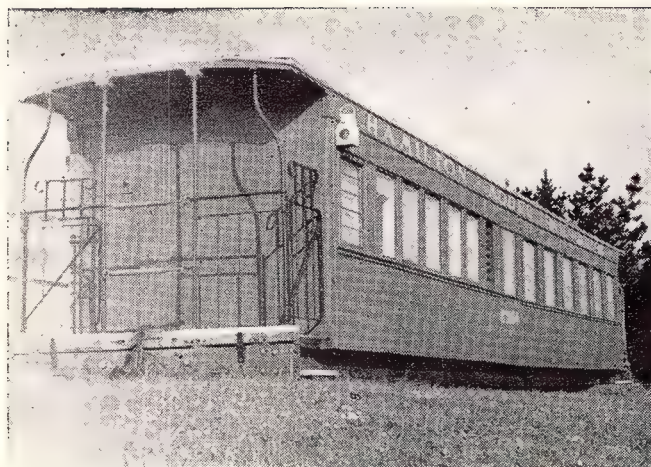
The trackwork as shown on the plan is now all in position although the branch line terminus trackage is of a temporary nature pending the finalising of the design of the yards at that point.

The trackwork was carried out in four main stages:

(1) The track from the terminus (on your left) to the port (on your right) was laid first, giving point-to-point operation at an early stage.

(2) Next a concealed loop was run under the back of the town, across the spectators' aisle right in front of you (watch your waistline) and so into the port, thus giving a point-to-point and a continuous oval.

Hamilton Model
Railroaders'
Clubrooms



(3) Next we added a branch line, running from the port, up the right hand side, across the main line by bridge and curving back to an elevated terminus at the far end of the spectators' aisle.

(4) Lastly, to give us out and back operation we ran a loop from the main line back under the branch line terminus and back to the town yards through a double crossover.

The operators, therefore, have a choice of point-to-point continuous and out and back with a branch line thrown in for good measure. Trains will thus be able to operate (1) in the town yards, (2) in the port yards, (3) on the main-line, (4) up the branch line all at once (provided the operators have eyes and arms in the right places!).

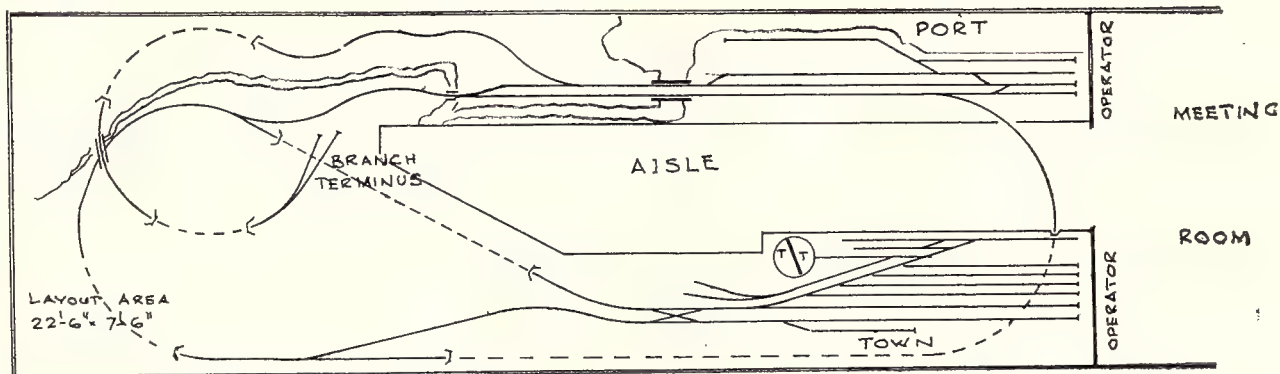
However, let's take a trip. Our taxi-driver has dropped us at the town station (as yet unnamed — although it has been called some funny names already!). We climb aboard our car-van which is attached to a goods standing at platform two. Down at the loco shed can be seen our loco just backing down the track. As we are early we look out at the yards. In the distance we can see the turntable and loco shed, with 2 factories complete with sidings at the rear of the turntable and the ash, coal and water facilities can be seen on the track where our loco has now paused while the fireman changes the points. (At least we would see all these buildings if they were there but our imagina-

tion is pretty good and will have to suffice until all the buildings are in place).

The yards carry quite a range of rolling stock as this is a busy inland town and is the main distribution centre for freight emanating from the port and the coalmine and timber mill situated up the branch line. At the back of the station the morning railcar is just pulling out so we shouldn't be long now. Ah yes, that gentle (?) jolt warns us that our loco has backed into — er — up to, our train. Rising from the floor we resume our seats as with a series of whistle blasts we pull out, over the crossover and taking the right-hand track, proceed along the side of a cliff face for a short while before plunging into the first of the series of tunnels the Railway uses to pierce the mountains between us and the sea.

Soon we are back in the daylight and our train proceeds around a big sweeping left-hand curve with a sparkling creek alongside the track as it nestles under precipitous bluffs. No tunnel was needed here as the railway follows a gorge carved out by Nature countless years ago. Soon we pass under a wooden truss bridge and the friendly guard advises us that this services a branch line and sometimes trains can be seen trundling overhead but not this time, however.

It isn't long before we plunge into another short tunnel and out to run



through a valley before entering the longest tunnel on the line. Eventually we feel the brakes being eased (?) on and then as we clear the portal we can see the train ahead crossing a left-hand curved masonry arch bridge and shortly we slow down to a crawl as we enter the limits of the bustling seaport yards.

Grabbing our luggage we hop off for a look around. The tang of the sea is really good, the wheeling seagulls emit their high-pitched cries and the rattle of ships' winches mingles with the rumble of wagons as the dockside switcher shunts on the wharf. Wandering over, we pass by a small loco shed and several large stores and find two ships in port. One is a coaster loading coal from short hoppers and the other is a Japanese freighter being loaded with pine logs and sawn timber. After dropping a few hints, we managed to cadge a cab ride in the switcher. The driver, a very friendly type, explains that he has just brought a train of coal and logs down from the branch line and would be going up and back again shortly.

Would we like to come? "Would we! Half-an-hour? Okay, we'll grab a bite and be back." After lunch we climb aboard and soon we are off. We thread our way out of the yards, running in reverse and soon we are crossing Croppers Creek on a timber deck-girder bridge. Alongside this is a steel deck-girder which we learn is on the main line. With a roar, the throttle is cracked wide open and we soon learn the reason as we pass through a switch and head up the steep grades and sharp curves of the branch line. Below us we can see the main line and in the distance, we can see the port with the two ships still loading, smoke drifting lazily from their funnels and the sun sparkling on the water of the harbour and the river which runs down to the sea.

Ahead we can see the rocky portal of the first of the branch line's two tunnels and with a rattle we enter it, hastily slamming all windows and cab doors. Slowly we come out into the sunlight again and ease across another timber truss bridge glimpsing the main line below us.

Around a curve and ahead is the second and shorter tunnel and beyond is the terminal. Small, and situated amongst towering hills, it contains a sawmill, a coal mine, a small platform and one room station, a few mill houses, 36 dogs (all barking) and about a dozen or so inhabitants waiting for the train. The driver passes out fresh bread, mail, papers, etc., and then for the next 20 minutes treats us to some mighty fancy shunting as he drops the empties and collects loaded cars of coal and logs from the short and congested sidings. Running around the train we are back at the head and homeward bound.

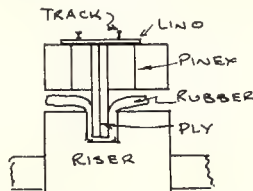
All too soon we are back at the port and after farewelling our friendly "host" we catch the afternoon railcar back to "town".

We soon clear the port yards, cross the steel girder bridge we saw earlier

and head on up the river gorge with the branch line on our right. Around the curve, under the bridge, into the tunnel and up the valley again where soon after leaving the tunnel we take the left-hand road at a switch, roll through a cleft in the hills, along the cliff face and enter the town once more through the same crossover we used this morning but from the "right-hand-side".

Well, so much for fantasy, here are some facts.

The benchwork is largely made from 3 x 1 pine screwed together in the conventional manner and the trackbed is mainly of two types (a) $\frac{1}{2}$ " timber with pinex softboard glued to it and maltoid glued to the softboard. Easy to put down but a trifle noisy! (b) A "sandwich" of 4 vertical 2" strips of pinex glued to a central core of two 3 ply strips with rubber "lino" glued to the top. This sandwich was allowed to follow its natural curvature and was supported on rubber "bushings" in 3 x 1 risers. (see sketch). The result is quiet with sweeping and realistic curves.



SET UP PLY FIRST TO REQUIRED CURVE THEN GLOE ON PINEX LAYER BY LAYER WITH 'G' CLAMPS

The rail used was Peco nickel silver in 18", 36" & 120" lengths laid in 3 ways — glued with Pliobond, spiked direct to the "lino" and spiked to home-made wooden ties glued to the lino

(largely up the branch line).

The total length laid is around 190 feet and the points total 29. Most of these are Peco streamline to allow members universal running rights but the double crossover was scratchbuilt by Fred West. The trackwork is about 95% complete and the basic scenery work is 85% complete but the work of providing buildings, 2 bridges and final details remains ahead of us.

Talking of scenery — the basic substructure is formed from scrap timber covered with $\frac{1}{2}$ " wire netting formed by hand to the shape of hills and the mountain range which lies between the sea and our inland township.

Over the netting we applied layers of 2" wide gummed paper strips to act as a base for the plaster. We found this paper overlay had another advantage — it gave us a much better appreciation of how our final plaster would look as to size and shape, than did the wide open netting. Alterations — hills too high or too low — were easily remedied at this stage. After the paper was applied, we "peppered" it with a 4" nail to make sufficient holes for our plaster to "key" to and then applied our plaster. Three main "mixes" were tried: (1) Plaster of Paris

HELP WANTED

To enable us to give more information on our rollingstock plans we need to know details of colours used on vehicles from the various railway systems. Would Members or subscribers be kind enough to drop us a line with information regarding roof, body, underframe and bogie colours and any lettering on the vehicles.

Try and relate these colours to those used by the manufacturers of model paints or the larger paint manufacturers. A sample from a colour card would be a great help.

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We have recently re-stocked on parts and spares for common brands and while offering complete workshop facilities, are always willing to do a portion of the work that may be beyond your equipment, such as wheel trueing, making special stacks, etc. Don't put up with Tri-ang locos with only half the valve motion, or try to make an eighth Whitworth screw do to hold a coupler. We have a full range of B.A. screws from 16 up, and can always prepare special length screws.

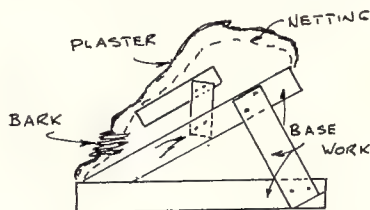
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with various admixtures such as sand and sawdust. (2) 3 parts of Asbestos "shorts" to one part of portland cement. (3) Perlite (one of the commercial pozzolans) and cement in the same proportions as (2). Mix No. 1 was soon discarded — too expensive, too prone to cracks. Mix No. 3 was better, but the Perlite, although producing an almost perfect slightly rough texture, was too brittle. It was found better when mixed with asbestos shorts.

However, Mix No. 2 found most favour. The "shorts" gave the plaster a tough, fibrous character, it was easily moulded, readily carved and takes oil colour. Washes well. In this mix we added dry powdered colour — burnt and raw sienna, burnt and raw umber as required to give varying colours to varying sections — so that any cracks would not show up as a glaring grey/white.

Rocks were formed in various ways. One section was effectively modelled by throwing on small blobs of plaster whilst the parent material was still plastic. Although it sounds haphazard the result was quite good. Then broken pieces of pinex were inserted into the wet scenery in layers — this wasn't too bad either. Next we tried "carving" out-crops with a screwdriver and also by pushing a broken piece of pinex repeatedly into wet plaster thickly applied over the base coat.

Both methods, carefully used, are effective. Best of all however, was pine bark, carefully selected for shape and texture, and applied to the plaster sur-



face. Here again we tried two methods. Firstly we applied the bark by "gluing" it to the dry base plaster with a thin layer of plaster, adding more plaster as necessary to ensure a bond. Secondly, (a better method we found), we cut the netting before any plaster was applied, fixed the bark, and then applied the plaster. This made the "rocks" appear to be "growing" out of the ground which was the effect we were seeking.

There were some sections where we felt that plaster was not the answer. One example of this was the bed of the river and the harbour. Here we used Celastik. This is one of the cloths similar to the Fibre Glass range. It is like

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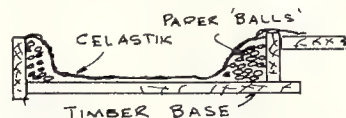
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a thick grey pliable cardboard to look at before treatment and will cut quite readily with scissors. It, and the clear solution or solvent, is available from merchants. We applied it as follows:



We filled a wide necked jar with solvent and one member donned rubber gloves (the solution will cause dermatitis if allowed to touch the skin, we were told) and the other worker picked up the scissors and proceeded to cut the Celastik into strips and small pieces. These were picked up by the man with the gloves and dipped into the solution which immediately softened the material until it was like a damp flannel. After squeezing out the surplus solution the pieces were applied direct to the timber base to the river, overlapping as necessary, and smoothed out, or wrinkled and shaped with the gloved fingers. When it dried it was found to be firmly stuck in place and holding its shape. Where we wanted banks and slopes we formed these with screwed up newspaper "balls" and fixed the Celastik over them. For anyone with a similar problem we can really recommend this material.

Finally, to set off our layout, we cut removable backdrops from Ivory board (a 1/8" "paper" board) and these have been most realistically painted by one of the members.

Future work? Ah yes, there's plenty still to do and no doubt some interesting experiments and perhaps new methods lie ahead. We want to add a TT line from the branch line terminus to an imaginary bush logging camp "back 'o the mountains" so that we can bring logs in to our mill; the buildings and

ships at the port are still to be made and we want some curtains hung below the benchwork to conceal this from visitors. The 2 operator's boxes have to be finally "fitted out" and we need to rearrange our ceiling lighting to better effect.

We have had a lot of fun, learnt a lot and above all we have been "model railroading" which is, after all, what interests us most. We believe we have the makings of a layout of which we, and you, can be proud and trust that our visitors will agree.



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Members of the Southern Cross Region of the National Model Railroad Association may now purchase envelopes bearing the imprint illustrated above for their own personal use.

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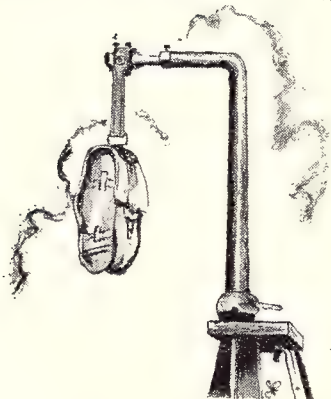
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MAIL BAG



Sir,

In reply to Mr. Lehmann's letter in the Aug./Sept. issue, I would start by asking just who is he kidding?

To take his letter point by point:

(1) The term "Railroad" is as old as "Railway" and not only in U.S.A. Also I could lend him a copy of the Official Guide if he is interested in finding out just how many railroad companies are registered as such.

(Just so you, Mr. Editor, won't feel duty bound to change the name of the magazine).

(2) O.K., so I'm not particularly interested in the article on the railway museum either. But I read it and if I were sufficiently energetic I could have written an article of my own just to see my name in print. (So could Mr. Lehmann).

(3) Plans of Australian rolling stock — In the odd collection of copies I have on my desk there is a plan of an Australian freight car in every issue. NO WRONG! One issue has plans for a diesel (in 3 scales too) and one is a New Zealand car.

(4) The first 100% NMRA Club probably likes the name of its layout and the name doesn't necessarily mean that US prototype is followed. From what I know of the NSW boys there is probably a fair proportion of NSWGR models on the roster. Don't like much of the NSW stuff meself — too British — but who am I to complain? They don't ask me to like it.

(5) The review of Bill Coles' kits — Knowing some of the background of this and reading the review, I fail to see what Mr. Lehmann is getting steamed up about. If the kit arrived too late to photograph, bad luck. We'll see it in another of the kits later on. I certainly don't see any insult (and believe me, I can pick 'em!).

(6) Don't, Mr. Editor, please don't regard yourself as a failure (and a miserable one yet) in your "job". We aren't all so unhappy at the way AMRM has turned out.

(7) Mr. Lehmann's conglomeration of terms is puzzling. He says: "Drop the words switches and trucks and use the words turnouts and bogies" for a more Aussie flavour. — Surely "turnout" is pure Americanese and anything with four wheels is referred to in these parts of Australia as a truck.

On sober reflection, I must regard Mr. Lehmann's letter either as a joke or an attempt to promote correspondence. Either way, he has achieved his aim. Best wishes for the continued success of A.M.R.M.

Belair, South Australia.

J. A. POM.

Sir,

I wish to submit my views on Robin Lehmann's letter in "Mail Bag" in Aug./Sept. issue. As we now have a magazine produced in Australia I prefer to see articles, etc. on Australian prototype as overseas is covered by so many excellent magazines, it's something out of the blue to see Australian railways (or model railways) in those magazines. England alone has quite a number of model railway magazines, so why put in material we have seen so much of and starve us of local model articles, especially as we now have this beautifully produced magazine. I'm sure there must be numerous extensive layouts that many of your readers would be interested to read about.

I have also experienced, as Robin has mentioned, overseas people use different names to what we are used to in Australia for similar things. So I also suggest you use terms more familiar with Australian hobbyists, bogies instead of trucks, etc. . .

Once again I wish you every success with this magazine and I look forward to contributing photos, and articles in the near future.

Mont Albert, Victoria.

WALLACE THOMSON.

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Sir,

May I be permitted to reply to Robin Lehmann's letter which appeared in your magazine's last issue. Firstly, I feel that the remarks expressed were those of an extremely uncouth juvenile who could well be doing himself a lot of harm in the eyes of the magazine's readers as well as to the hobby itself. The entire letter was such that I wondered if the writer was a genuine model railway enthusiast, with an operating layout. His objections to the use of certain words used in the magazine shows a marked degree of immaturity, the word "Railroad" may well be a word used by Americans but that does not make it unusable else where, in any case, whether the word "Railway" or "Railroad" is used, the meaning should be known to all.

Secondly, the fact that there is a series of articles on "an American Museum is of no interest to me and probably not to many other readers either", in my opinion puts the writer in the "Windbag" class, hence my earlier remark of whether he actually had an operating layout or not. This insidious remark only hastens one's estimation of the writer who apparently considers his feelings on the matter to be those of every railway enthusiast in Australia. May I say, Sir, that you do not speak for me, nor would I venture to say, for a lot of others. One must be tolerant in this hobby whose many facets interest many people and just because one's opinion aren't adhered to doesn't mean to say that every one is out of step, save I.

Your choice of words were not exactly accurate as you speak of giving "foreign models a full page review". This word is not the usual Australian way of describing overseas manufactured goods and coming from one who wants a greater "Aussie" content, one begins to really wonder especially when the writer is a member of the N.M.R.A. which is so American.

Turnouts is another word I would not have expected to see as I have always believed the word to be points, however I could be wrong.

From my own observations of the plans appearing in this magazine I would say that Australasian railway enthusiasts are getting a very good deal and that this magazine is far from failing miserably. May I make one request that you read again the editor's report for the year wherein he points out the difficulties associated with the production of the number of pages in relation to the advertisements received. Quite obviously this person is aware of the failings and, as such, he is endeavouring to see them corrected. As this is the case, then it is up to all Australian modellers to give their support to the magazine so that it may, at some stage in the not too distant future, be able to cater better to its readers' needs.

However, lest my above remarks shatter you into little pieces, or leave you helpless and drained of every ounce of self respect, may I extend a helping hand as it were for one good point you made, namely that this magazine could well support those who are endeavouring to market Australian made kits of local prototype.

Here, dear boy you do have a good point, and it is somewhat of a pity that you didn't confine your entire letter to this one point. May be in future the staff of the magazine could review at length (with photos) local kits, so that those who are attempting the difficult job of putting out local kits may be encouraged to carry on and even enlarge their range. This magazine could well be and should be the voice of the local manufacturers. However, these manufacturers should in turn make themselves known to the readers by sending samples to the appropriate person on the magazine's staff for reviewing in future editions.

May I, in closing, say that (as one whose layout is not of the local prototype) I think this magazine is doing a fine job as is, and that I know it will continue to do so as times permit.

W. J. CHRISTIE.

(Correspondence on this subject is now closed.—Ed.)

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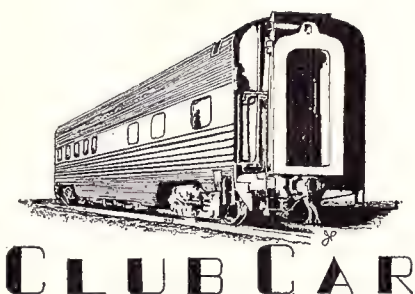
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To Club Officers: These pages are available for the dissemination of news about your societies. Brief news about activities will be welcome for these pages. Closing date is fifteenth of month prior to month of issue.

N.M.R.A. ACTIVITIES Eastern Division

The day trip to Gosford by special train was a great success. This was due in no mean way to Don Taylor's organising of visits and transport. Not only were we allowed to inspect the railway yards but also the rather large and busy signal box. After lunch we visited Don's own model layout which has now been partially sceniced and is developing quite well. Also we were able to see some excellent models of N.S.W. prototype made by other modellers in the district. A very enjoyable afternoon tea by Mrs. Taylor helped round off a meeting which was different.

A film evening will be held at the A.M.P. Theatre, North Sydney on Friday, December 4th, at 7.45 p.m.

On Saturday, December 19th a visit to the Sydney Live Steam Locomotive Society at West Ryde has been organised with a barbecue to follow.

Members are reminded to bring their friends and families to both these functions.

There will be no meeting in January but on February 6th a meeting will be held at the home of Fred Palmer, 8 John Street, Kogarah Bay.

The March 6th meeting will be held at Jack Spedding's home at 24 The Glen Rd., Arncliffe.

Central Division

The officers of the Division take this opportunity of wishing all our members the Seasons Greetings and Best Wishes for a Happy Railroading New Year.

The last few meetings held in '64 were very well attended and models as well as films were shown to the members. I wish to thank all members who were able to volunteer to have a meeting at their homes.

The New Year brings with it an increase in the number of Central Division members and it is noted that some are remote from Adelaide where our group meets. We would appreciate hearing from these members and maybe we can encourage them to form their own group within their district.

Perhaps some form of "roster" letter could be used to form a correspondence group. Hoping we hear from our "distant" members in the near future.

For the New Year meetings will be held on the following dates:

January 20: V. Hill, 59 Holbrooks Rd., Flinders Park.

PETER WOOLEY & "THE GLEN" MODEL RAILWAY CLUB



"I say — according to Section 6, item 12 of the Air Pollution Abatement Act you cannot run diesels on Pipe Tobacco."

February 10: M. Bastian, 25 Garth Street, Kilkenny.

March 10: N. Gully, 8 Lloyd Street, St. Marys.

Advance Notice. — It is proposed to hold a model contest some time mid-year in '65 and will possibly be restricted to Freight Cars, and Wayside Structure, i.e. two divisions. More details later.

Sunshine State Division (Queensland)

As usual the Division participated in the Brisbane Model Railway Exhibition, which was held from November 9th to 14th, in the Main Hall, in the Brisbane City Hall. In past Model Railway Exhibitions, the Division has contented itself with a static display of models, but, this year the Division had a much more ambitious stand, a small layout, fully sceniced, which was operated by members of the public pushing a button. This proved to be extremely popular, so much so, that we had to replace the push-button with a new one, it is impossible to estimate how many thousands of fingers pushed the button, but, it can be stated that the layout was never idle for long. During the course of the six day Exhibition, it was recorded that in excess of 21,000 persons visited the Exhibition.

The annual Christmas Party will be held at the home of Paul Leuven, 23 Grey Road, Hill End on Saturday December 12th, at 2 p.m.

There will be no January meeting, the first meeting of the New Year will be on Saturday February 13th at the home of the Division Representative, Dan Sheehan, 68 Mearns Street, Fairfield.

For further details of Division activities, members are advised to contact the Hon. Secretary, Greg Gilby, 33 Paragon Street, Yeerongpilly, phone 48-7675.

OTHER CLUBS

AUCKLAND METROPOLITAN MODEL RAILWAY CLUB. Hon. Sec.: Warren Cunningham, P.O. Box 5883, Auckland C.1, N.Z.

The club recently held its 4th Annual Exhibition at the Museum of Transport & Technology which this year was the best yet. Approximately 6,000 people passed through the display which was open for 9 days. In November the annual competitions were held and a fine display of members' work greeted the judges. The first meeting for 1965 will be on the 19th January and all persons interested are invited to attend.

GEELONG RAILWAY MODELLERS. Hon. Secretary: J. Macdonald, 15 Arkana Avenue, Highton, Geelong, Victoria.

The club combined recently with the local branch of the Railway Historical Society for a film evening. The standard of the films was very good, they were mostly from the Victorian Railways and very interesting.

The club layout is at a slight standstill at the moment as a lot of members have examinations at this time of the year and some of the older members have been working a fair bit of overtime.

The Club has become affiliated with the Victorian Model Railway Society recently and it is pleasing to be able to report that one of our members took the Victorian Railways Commissioners trophy for the outstanding model of this year at the annual competition held on 19th December last. He is Bob Dunn who recently was fortunate enough to be in Sydney during the exhibition of model railways held in the Town Hall. His prize-winning model was a Victorian Railways 'S' class diesel and the carriages of 'The Spirit of Progress' entered as a complete train.

CLUB CAR (Cont.)

SOUTH AUSTRALIAN RAILWAY MODELLERS ASSOC.

The Club meets every second Wednesday of the month in their clubrooms at the Railway's Institute. Fees 25/- adults and 15/- juniors and students. Everybody welcome, come one and all. In the previous months two displays were put on by half a dozen members to aid worthwhile organizations. On display were two or more operating layouts plus a completely detailed circus and train. The layouts belonged to Messrs. Stan Filsell, Bill Coles, Bob Irvine and the Circus to Trevor Carter.

Any other model clubs in Australia wishing to swap 25mm colour slides and 8mm movie film contact sec. Mr. T. Carter, 7 Eurimbla St., Parafield Gdns, South Australia. Club has an extensive HO layout in their clubroom. After meeting entertainment is supplied in the form of running, slides, movie film, and talks by various members. Club activities include picnic, Christmas party, annual dinners, and trips to various Railway Departments. Any person wishing information on club please contact sec.

THE AUSTRALIAN RAILWAY HISTORICAL SOCIETY. Box 74 P.O. Broadway, Sydney, N.S.W.

This Society was founded in Sydney in 1933 and subsequently divisions have been formed in all states except Tasmania. Total membership in Australia is over 1500 and is steadily growing. The Society is affiliated with several overseas railway organisations.

The main objectives of the Society are to provide means whereby people interested in the operation and history of railways in Australia may associate with others with similar interests to their mutual benefit and enjoyment, to encourage the compilation of authentic records, to produce publications, to arrange outings and to preserve relics.

Each division holds monthly meetings which usually feature a prepared talk, films or slides on some subject of railway interest while time is set aside for members to meet together for exchange of information, photographs, etc.

The Society publishes monthly an illustrated, high quality magazine, the "Bulletin", containing articles of historical and current interest from all states. In addition most divisions produce a monthly news magazine covering detailed current events in their state. Books and recordings are also published from time to time.

Membership is open to anyone interested in railways provided that they are 15 years of age or more. The current subscription rate is £22.0 per annum and includes the "Bulletin".

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NOTES OF THE SYDNEY MODEL RAILWAY SOCIETY

CLUB "O" GAUGE NEWS

During early November TV Channel 2 was in the Club for the filming of O Gauge for "WEEKEND MAGAZINE". After much humbug, and upsetting the H.O. boys, and 3 to 4 hours for film making, it was only about 4 minutes on TV. John Bowen and Bert Hetherington were the stars with a C38 class Loco. This loco belongs to neither of these men but to new member Arthur Hall. By all rights he should be the one on TV. In plain words with the time that was spent in Club rooms, and film used, we were robbed at the showing.

This is a reminder and a warning to O gauge that from the opening night in 1965 all couplings on rolling stock or locos, are to be of standard height 5 $\frac{1}{8}$ " from rail level to bottom of coupling and centred by the owner, so that no matter where on the layout two pieces of equipment may couple. If they are not correct they will be adjusted by the Running Committee and failing this they must be removed from the layout till they are passed as O.K. There will be no transition couplings. Be warned for 1965.

In the past all members were required to pass a test on all boards before operating and some members are not as good as they could be so this being the case all members will be required to pass again to the satisfaction of the Running Committee in the New Year. The New Year will see a new control panel at Junction being put in by John Alexander and all signals must be followed by the driver and signalman. Later other control areas will be followed by the same kind of boards. This is one of the reasons you must pass to be allowed to operate. Altogether there will be a general tightening up in O gauge so that better operations can be had on the layout in 1965.

There was only one new piece of rolling stock this time with Ted Davies' custom-built 70 class Diesel. Very nice shunting loco Ted.

During the recent Model Railway Exhibition at the Lower Sydney Town Hall, Norm Read was on the information booth, other members being present as ushers. Some members had their models on display. It was a disappointment to most, that there were no working O gauge layouts on exhibition. Resulting from the Exhibition was a visit to the Club's layouts by New Zealander, Ray Dickers, who was most impressed with the size and variety of the layouts. Ray also paid a visit to John Bowen's O Gauge layout at Penshurst, to see the extent of model railways in members' private layouts.

A reminder at this stage that all subscriptions become due in April-May 1965 and in due course notice will be placed

on notice board and a further reminder in this Bulletin.

Christmas night is Monday 14th December 1964 with sound films on British Railways. These are 1964 films. Club members are asked to bring a plate of eats, with soft drinks served afterwards. All members are also invited to bring their families and or friends. Films start at 8 p.m. sharp. Films are in room 513 fifth floor. Please be seated by 8 p.m.

On behalf of the President, Paul Simpson and Secretary John Bowen the Committee extends to all members and their families a Merry Christmas and a Happy and Bright Model Railroading New Year.

HO ACTIVITIES

Arthur Wheatley has been very busy working on building a model of a N.S.W.G.R. Garratt 60 class engine. After chasing around taking photos of the full scale prototype and securing plans of same he has started on the model which has reached the stage where it has the two chassis with driving wheels and bogies. Arthur has put two motors in this engine but said that you could possibly use a diesel power unit under the boiler to drive it.

Bill Gallway used his new loco in the H.O. roster it being a model of a 1300 class 2-8-2 Mikado the prototype being built by Baldwin, the model by Akane, of Japan.

John Stearman had his Sth Pacific P4 4-6-2 Vand. tender vintage 1928 and a C10 2-8-0 Vand. tender vintage 1928 both built by Austin of Japan. These locos were seen working in the Central Goods Yard and also worked goods trains to Wits End & Glenvale.

John Glastonbury was operating at Wits End and had his Brill Gas-electric a prototype of the Sth Pacific. He has modified the motor drive and pick up which has improved its running. Diodes have been fitted to control the headlights so as they light up whichever way it is going.

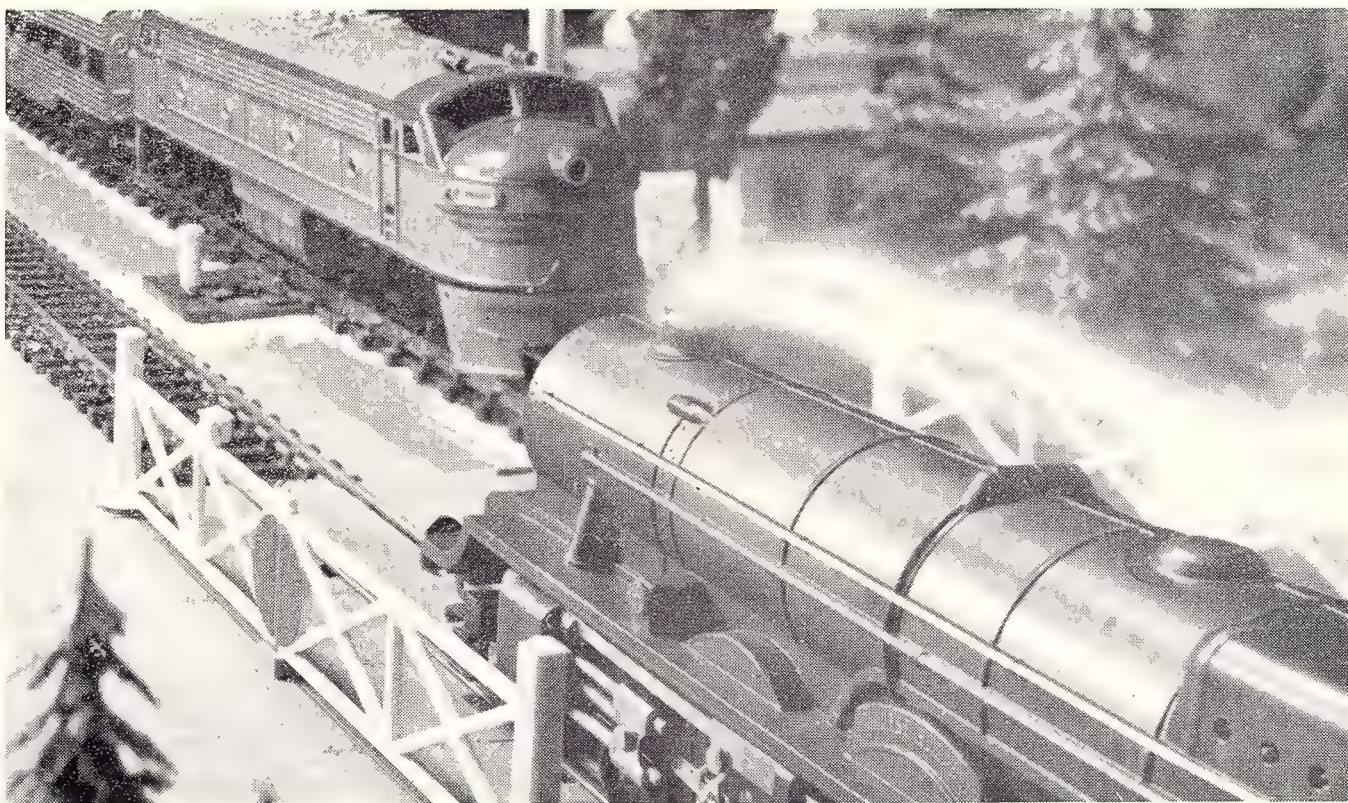
Eugene Duff has altered the accept and offer keys so as when you offer from one board A to another control board B a red light appears on B. When he accepts a green light appears on A control board which releases A train to B. After train arrives at B he moves his accept off but the green remains on at A until he moves his offer key off. After each train movement all keys must be moved to neutral position and point switches turned off. This procedure will stop that loco moving off when it should not.

Lee Gallaway has an Old time passenger train consisting of a combine and open ended passenger cars, Vintage 1860 with brass rails and chocolate color sides being hauled around the H.O. lay-out by a Diamond stack 2-6-0 loco.

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HELPER SERVICE

Q.: (a) What is the difference in OO, HO, and TT gauges in relation to the prototype? (b) Also what is the difference of OO, HO, and TT, for scales? — R.J.C.

A.: It will be simpler to take the "B" portion of your question first; these initials denote the different scale relationships of the model to the prototype. As far as we are concerned in Australia, OO may be taken as the English version of this scale, i.e. the body work and superstructure is to a scale of 4mm. to the foot, and the frame width and wheel gauge is to a scale of $3\frac{1}{2}$ mm. to the foot. In other words a general side view is in proportion, while an end view gives the impression of the rolling stock being too fat. Hornby-Dublo, and Tri-ang are two brand examples of this error. OO was used in North America, indeed it still commands some adherents, but in this instance, the scale relationship of 4mm. is carried right through the job, and the track gauge is 19mm. In U.K. OO, by the way, the track gauge is 16.5mm., which scales out at well under the standard 4' 8 $\frac{1}{2}$ ". There are virtually no commercial examples of U.S.A. OO available today.

HO is scaled at $3\frac{1}{2}$ mm. to the foot, and models in this size are in proportion throughout.

TT comes in quite a few different size relationships the two most common being 3 and 2 $\frac{1}{2}$ mm. to the foot. The former is probably the best known here, and Tri-ang TT is one example. As with English OO, the models are oversize for the track, whereas with the European brands such as Rokal, the track gauge is somewhere near correct for the model.

In England the usual practice is to say, for example OO gauge, when what is really meant is OO scale. It would be more correct to simply say OO, and if one wants to suggest any gauge less than the standard 4' 8 $\frac{1}{2}$ ", qualify by saying OO n2, which would mean OO scale running on track which represents two foot gauge on the prototype. The "N" part is used for either scales, a common one for logging lines would be HO n3.

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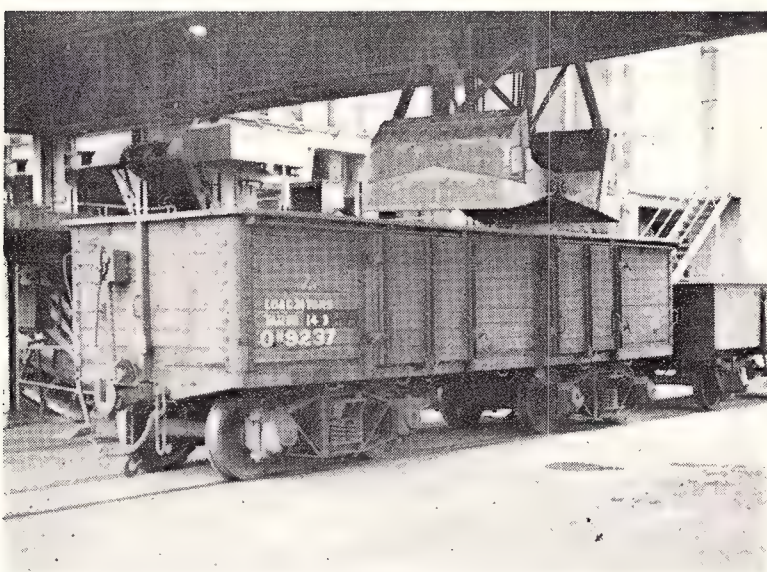
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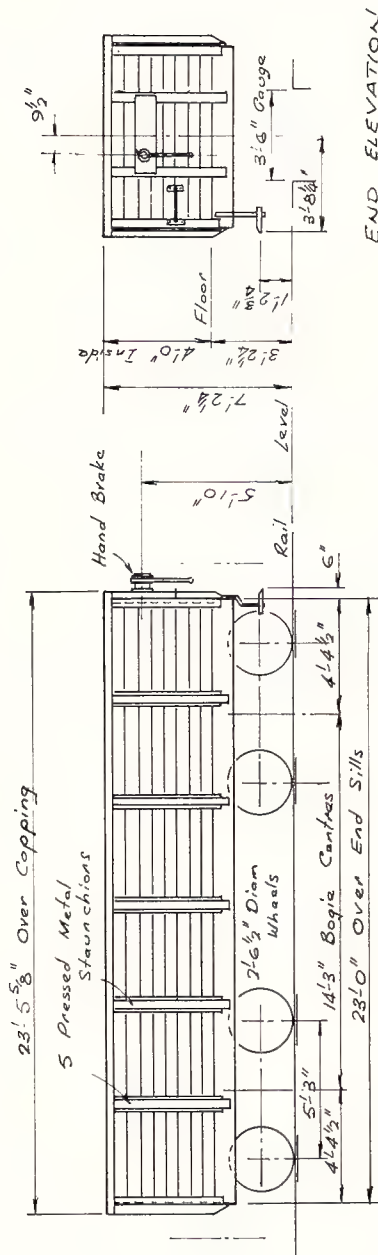
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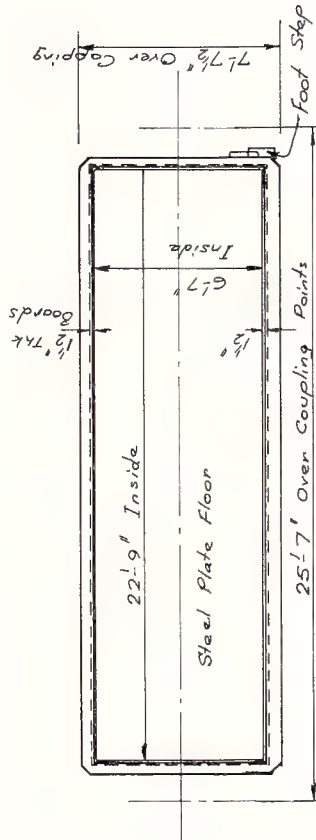


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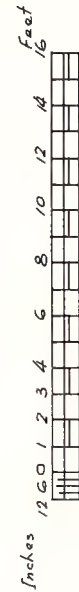


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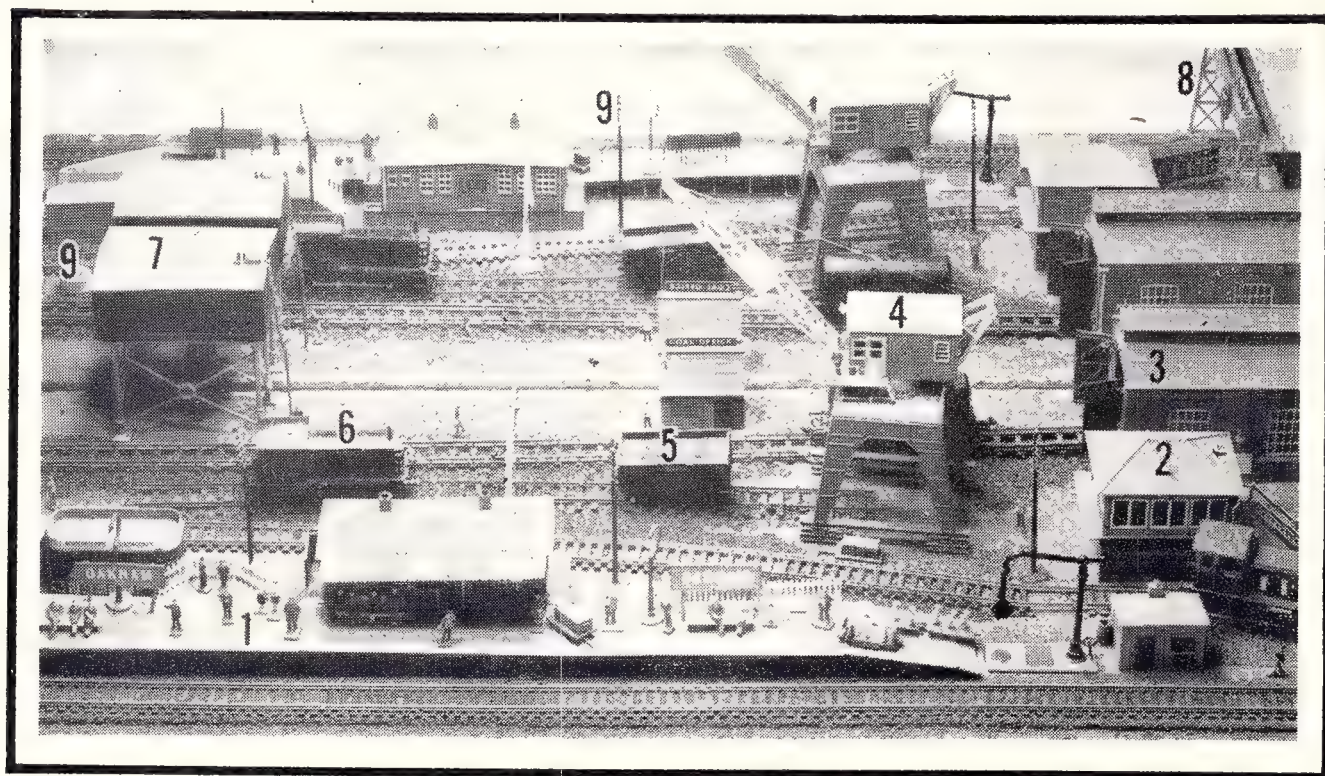
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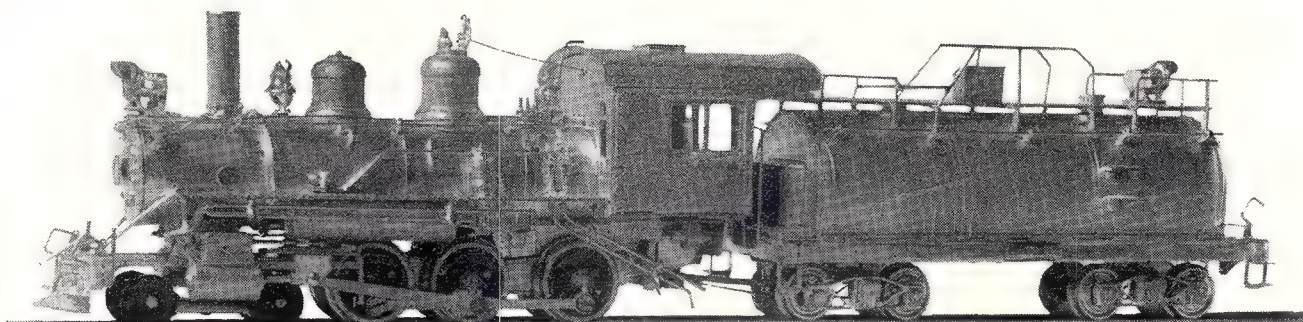
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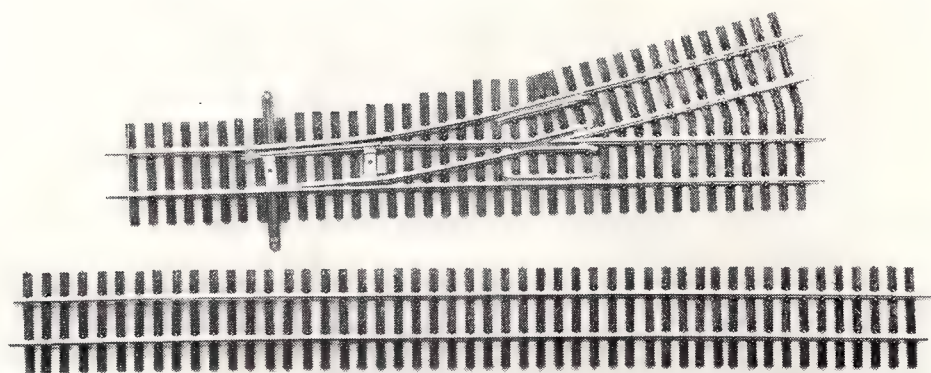
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Triang have delivered stock of their new 12mm. rolling stock wheels with improved contour and needle point axles. Both Disc and Spoked Wheels are available at 1/6 per pair ... In addition to the new HO_n3 Trucks illustrated above, Kumata are now tooling for an Archbar truck having a vintage wheelbase of 3'7". Price is also expected to be 14/- per pair ...

N.M.R.A. official Standards Gauges are now available, for HO and O scales, at 14/- each ... For 'O' gaugers, Walthers have delivered the following passenger car kits: No. 9117, S.F. 80' Pullman Parlor

Dining Car, £11/1/0; No. 9160, S.F. 80' Dining Car, £11/19/0; No. 9111, 8 Section Pullman Car, £11/1/0; No. 9153, S.F. Combine Car, £10/6/0; No. 9156, S.F. Coach, £10/6/0; No. 9159, S.F. Dormitory Lounge Car, £11/1/0 and No. 9161, S.F. Observation Car, £12/14/0. All are complete with 6 wheel Pullman pedestal Truck Sets and Diaphragms.

No's. 9175 and 9122, S.F. Modernised Coach and Modernised Baggage Car models, respectively, are also to hand at £9/15/0 each, complete with 4 wheel pedestal truck sets and Diaphragms. Separate 6 wheel Passenger and Buckeye Trucks are also available at 57/- per set ...

By the time this appears in print, Kumata will have delivered stocks of both the HO Steam Tram 'Motor' at £7/12/6 and HO_n3 0-4-4-0 Plantation Mallet Tank Loco. at £10. The same consignment will also include a fine single truck tramway Freight

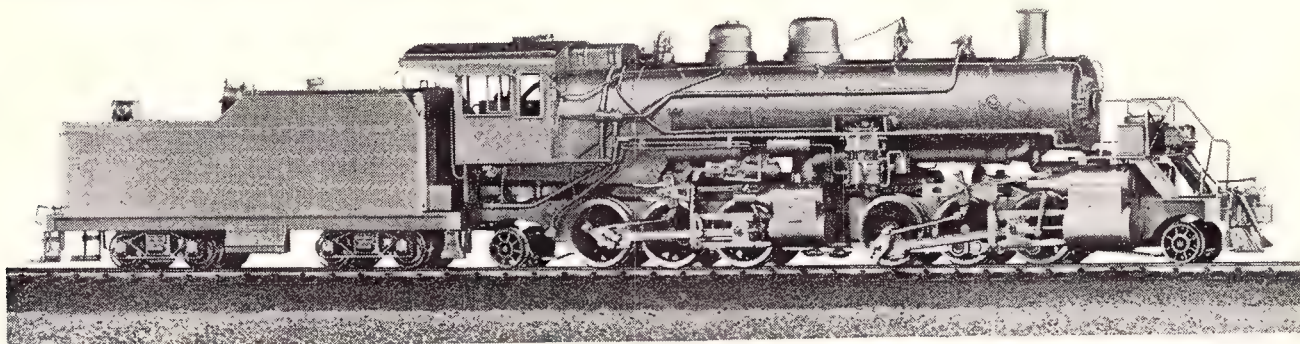
Car, mounted on a Brill 21E truck and fitted with a 'wood engraved' brass body.

An insulated trolley base enabling optional power collection from overhead wire or track circuit. Unpainted, ready-to-run, price for this model is only £5/12/6.

In 'O' gauge, K.T.M. motive power presently includes the following locomotives: 3 Truck Shay, £95; P.R.R. Class 'G-5' 4.6.0., £90; S.P. Class AC-4 'Cab-ahead' 2.8.8.4. £154/7/6; N.Y.C. Class J3a 4.6.4. £120; N.Y.C. Streamlined Class J3a 4.6.4. £125; 1890 Porter 2-6-0, £25; 0-4-0 Plantation Tank, £9/10/0; 2.6.2 Plantation Tank, £11/15/0 and General Electric Single Truck Steeple Cab Electric Loco., £9/10/0 ...

Just off the press, our 1965 OO/HO Fittings List. Some sixteen roneoed sheets covering our full range of many hundreds of fittings maintained in regular stock for the 'scratch' builder. Price, 2/6 per set, post free.

SIERRA 2-6-6-2 ARTICULATED BY 'UNITED' . . .



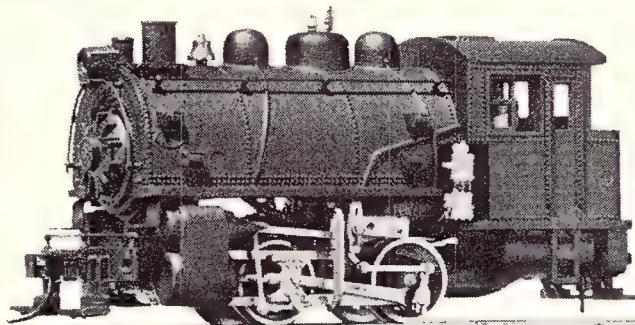
Not all articulateds were big, even on the big railroads. Baldwin's classic 2-6-6-2, as built originally for Weyerhaeuser, is a foremost example of the small, articulated, Mallet type. Modeled beautifully by 'United', with Pittman DC-70X motor and castings by Cal-Scale, this Locomotive is capable of negotiating curves down to 18" minimum radius. Unpainted, ready-to-run. Price: £43/0/0.

UNITED

OTHER 'UNITED' LOCOMOTIVES CURRENTLY AVAILABLE— U.S.R.A. 2.8.2., £35; Ma & Pa 2.8.0., £24/15/0; U.P. 2.8.0., £30; Rio Grande 2-8-8-2, £66/17/6; S.F. 4.8.4., £40; Southern Ry. 4.6.2., £35; S.F. 2.10.2., £36/10/0; P.R.R. 4.6.2., £33/5/0; Climax Geared Loco., £36/10/0; Climax Geared Tender, £5. Coming soon: B-2 Shay, £36/10/0; HOu3 Rio Grande 'K-27', £37/10/0 and Omaha 0.6.0 Switcher, £25/10/0.

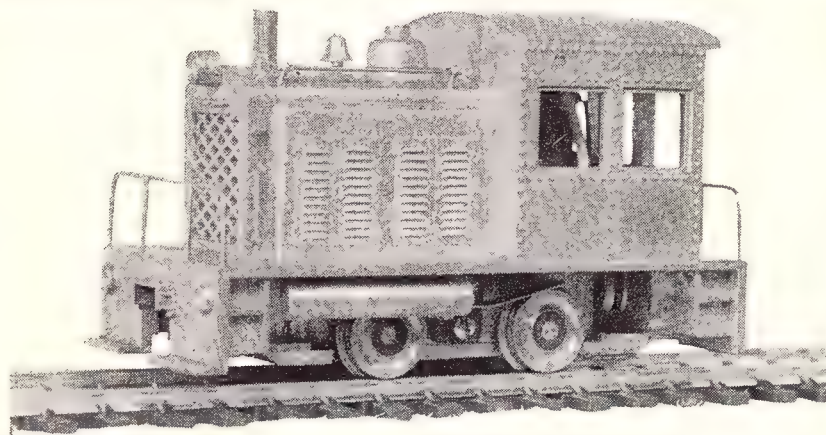
SWITCHERS BY SAKURA . . .

Undoubtedly one of the most popular of all HO models is that of the B. & O's "Little Joe", Class C-16. Modern in every degree with Walschaerts gear, piston valves and Ragouet reverse. 7" wheelbase, 21" over-all, No's 96 to 99 last operated in 1951. Sakura's recreation is the finest HO version ever produced with especially made motor and bronze sleeve axle bearings. Solid zamac casting with brass valve gear. Cal-Scale pops, whistle and compressor are included to cement into holes in casting. Otherwise ready-to-run, unpainted. 4" in length, weight 10 oz. Minimum radius, 9". Price: £6/19/6.



SAKURA

A small, modern, diesel switcher has long been wanted by the hobby and this new F.D. 0-4-0 Loco. is sure to win favour on a wide scale, as a result. Superstructure is a sharp zamac casting, dressed with brass hand rails, etc. Excellent traction is obtained by the combination of shear weight and powerful drive, effected through enclosed double worm gear. Available early 1965. Unpainted, ready-to-run. Price: £5/15/0.



P.F.M. TENSODO/UNITED/SAKURA CATALOGUE, 10/-

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No. 2186 In the Rain (beaut!)	8/9

Our object is to have a comprehensive array of high quality model railway and railroad equipment for supply to hobby and toy shops, and for modelers who live far, far away from any such and have no regular dealer. Where you can, and when you can, support your hobby shop!

FOR MAIL ORDERS, allow for postage on orders under £1 and for rail. track and bulky objects.

"PECO" FOR HO/OO

"STREAMLINE" FLEXIBLE TRACK in 3-ft. lengths.

Prototype in appearance, universal in application, this British Made Flexible Track bends without cutting of webs, and features wood-grained sleepers and Code 100 Nickel Silver Rail — high enough for all makes of wheels except coarse scale Trix — and non-slip underside pips. Suitable for 2-rail as is; with special conductor rail (SL-16) for 3-rail or Stud Contact Strip (SL-17) for Marklin.

FULL YARD LENGTHS No. SL-100X 10/6

RAIL JOINERS, NICKEL SILVER, Pks. of 24 No. SL-10 3/3

RAIL JOINERS, INSULATING TYPE, Pks. of 12 No. SL-11 3/3

With centre division to prevent rails butting.

RAIL CLEANERS, each, No. SL-37 3/9

One of the most popular of all products, this handy abrasive rubber block is kind to rails, but does a thorough cleaning job. It is useful for cleaning wheels, etc., as well. CORK BALLAST Slopes, Pk of 2, No. SL-32 4/6

To join Streamline to other higher tracks or to commence gradients.

FOAM BALLAST UNDERLAY, 5½ yd. Roll, No. SL-50 13/9

STUD CONTACT Strip for Track, pk of 6 ft., No. SL-17 3/9

This strip has studs ready in-built for use with "Streamline", thus making it suitable for Marklin and other Stud users.

STUD CONTACT Strip for Points, pk of 4 ft., No. SL-18 4/-

TRACK FIXING PIN, ¾" long, pks. of ¼ oz., No. SL-14 3/-

CENTRE CONDUCTOR RAIL, 6 yd. Bundles, No. SL-16 11/-

This pack includes spikes and instructions.

"PECO" FOR N (formerly OOO)

FLEXIBLE TRACK, 9mm gauge, same description as for HO/OO Track. No. SL-300X, Per Yard 9/9

METAL RAIL JOINERS (also suit Code 65 rail) in packets of 24 No. SL-310 3/3

INSULATING RAIL JOINERS (also suit Code 65 rail) in pks of 12. No. SL-311 3/3

FOAM BALLAST UNDERLAY, brown, in rolls of 16½ft. with indents to take track. No. SL-350 12/6

YOU and "RIVAROSSİ"

In 1965 you may not notice that locomotive powering and linkage are better than ever, but YOU will not fail to want one or all of the new HO/OO loco productions because they are — terrific! You will be glad to know that prices will be even better. Here are a few trusted favourites at their new price levels.



- Baltimore & Ohio 0-4-0 Loco with tender (as illustrated) with full valve gear & working headlight.

No. 1225 Ready-to-roll 7 gns

No. 11225/6310 Full Assembly Kit with power 6½ gns

- Baltimore & Ohio 0-4-0 Tank Loco, with full valve gear & working headlight.

No. 1221, ready-to-roll 5½ gns

- Indiana Harbor Belt 0-8-0 with massive 8-wheel tender, full valve gear, working headlight.

No. 1224 Ready-to-roll 13 gns

No. 11224/6302 Full Assembly Kit with power 9½ gns

Address Trade and Retail Enquiries to us; you may also see "Rivarossi" at selected retailers throughout Australia. Watch this magazine for details of 1965 productions.

IF YOU ARE LOOKING FOR A NEW INDUSTRY TO MODEL, TRY THE CHINA CLAY INDUSTRY WHICH WAS EXPLAINED IN DETAIL IN THE JAN. 1965 ISSUE OF THE "RAILWAY MODELLER"... AVAILABLE FROM YOUR HOBBY SHOP.

Bill Gardner's

AUSTRALIAN MODEL CRAFT CO.

Box 118, P.O., ALBURY. N.S.W.

THE AUSTRALASIAN MODEL RAILROAD MAGAZINE

Vol. 2, No. 12, Feb./March, 1965

Incorporating **THE BOOSTER**

THE OFFICIAL JOURNAL OF THE SOUTHERN CROSS REGION OF N.M.R.A.
Also THE YARDMASTER, The Bulletin of the Sydney Model Railway Society.

AUSTRALIA'S LEADING MODEL RAILROAD MAGAZINE

CONTENTS

	Page
HAND LETTERING MODELS	8
LIVEN UP THOSE TINPLATE LAYOUTS	9
AN AUTOMATIC HALT	10
MOTORIZING THE AIRFIX PRAIRIE TANK LOCO, by Cec. Palmer	12
X2F COUPLER MOUNTING PROCEDURES	13
PINE TREES BY THE DOZEN, by J. M. Wheeler	16
A NEW PAINTING TECHNIQUE, by W. J. Christie	18
HOW TO FILL A TRAINCASE or ½ A SCALE MILE OF HEATH ROBINSON	19
SCENERY FOR MODEL RAILROADS by Boyce F. Martin	21
REGULAR FEATURES:	
On the Cover	5
Shop Window	6
The Scenic Route	14-15
Helper Service	20
Mail Bag	22
Club Car	24
Yardmaster	25
The Market Place	26
Our Plan	27

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Editorial...

ONE of the problems of edit-
ing a model magazine is
that one is continually receiving
letters beginning "Why don't
you —". A recent example sug-
gested that the U.S. prototype
loco in the heading of Helper
Service be replaced by a pair of
South Australian locomotives. No
doubt if we did this then a week
later a Tasmanian fan would ask
for a scene showing a pair of
narrow-gauge locos struggling
along at the head of a string of
ore cars.

No doubt our correspondent
meant well but he did not think
to supply us with a drawing or
a photo. Our artist's comment on
the idea was "Too many members
are doing too little; too few doing
too much; too many expecting a
lot for nothing!" And I am afraid
I must agree. We, the small
editorial staff, feel that we will
go on publishing the magazine in
its present form until the readers
submit "good" articles instead of
pulling us to pieces for the
material we are at present pub-
lishing.

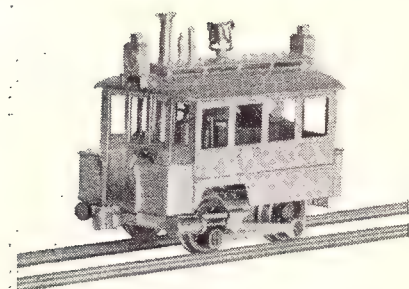
N.Z. MODEL RAILWAY MAGAZINE

WE have recently perused a
copy of "The Stoker", pub-
lished by the Auckland Metro-
politan Model Railway Club. Pro-
duced for several years as a
duplicated small magazine, the
February 1965 issue has blossomed
forth as a full size, fully
printed, well illustrated production
which is worth much more than
the 10/- NZ that is asked for a
year's subscription. This also in-
cludes overseas membership of
the Club. Write to P.O. Box 5883,
Auckland, N.Z. enclosing your
Money Order. We are sure you
will be pleased.

On the Cover...

David Bates, of Lalor Park, N.S.W.,
has a Trix Twin layout which
shows to good advantage how
skillful use of Falter and Airfix kits
can easily decorate the model rail-
road scene.

—Photo by Alan Baxter.



HO Baldwin Steam Motor 0-4-0

Manufactured by: Kumata, Japan.

Price: £7/12/6.

The model tested was sent us by the Dockyard in Melbourne and is a brass model imported by the same company.

The prototype steam dummy was used around the turn of the century and was the predecessor of the electric tram.

Later they became popular on logging roads in Canada and the United States. In Australia there were steam trams in operation from Cronulla to Sutherland up to the 1920's. The model tested was very similar and could easily pass for this unit.

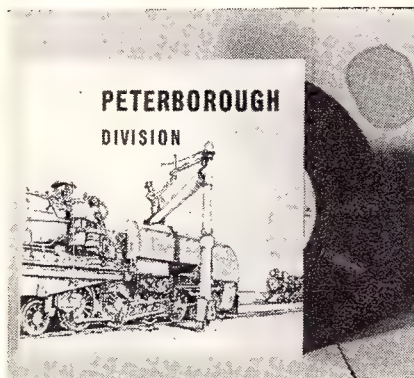
The performance of such a small loco was extremely good. Pulling three cars up a 4% grade. Because of its size, coupler height is well under NMRA standards, I had to fashion a wire loop for the tests.

The loco could quite easily be converted to HON3 for the narrow gauge fan and its dimensions, particularly the coupler height, would be more suited to this gauge.

Principal dimensions are:

Length overall couplers	18' 9"
Length of body	15' 3"
Height overall	13' 6"
Roof height	10' 9"
Coupler height	1' 11"
Wheelbase	7' 0"
Width overall	8' 0"
Wheel diameter	4' 0"

Performance: Uneven current draw in forward and reverse probably due to lack of adjustment; unladen current draw $\frac{1}{2}$ and $\frac{3}{4}$ amp; fully laden wheel slipping 1 and $1\frac{1}{2}$ amp.



7" Long Play Recording

Produced by: Rail Recording and Film Services, P.O. Box 95, Rydalmere, N.S.W.

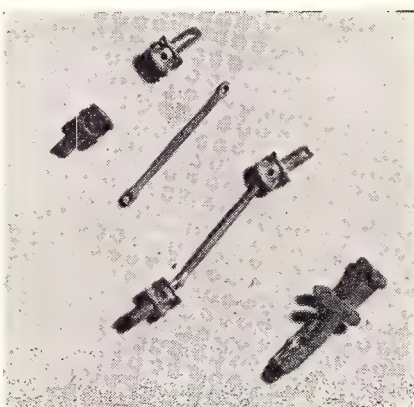
Price: 20/- each, post free.

The title of this recording is the "Peterborough Division". This division is a section of S.A.R.'s 3'6" gauge line running from Pt. Pirie to Cockburn to the east, later Broken Hill's Silverton Tramway Coy. extended to Cockburn to provide the first through link.

The locos featured are the "T" class 4-8-0 locos built by James Martin & Co. Ltd., Gawler, S.A.; Walkers Ltd. of Queensland. The other is the Beyer Garratt 4-8-2/2-8-4 which were built by the French Licencees of Beyer Peacock & Co. Ltd. and were erected in Peterborough.

Side one features the "T" Class making up in the Peterborough yard and out on the main line. The 400 class Garratt also shows off some of its paces with some fine climbing and down hill fast running. Side two features the Broken Hill Express firstly hauled by a 830 class diesel-electric loco, then by the 400 class Garratt. There's a fine pass between the T252 and the Garratt 402.

All told, a delightful twenty minutes of recorded steam power, a worthy addition to any steam fan's library.



Link and Pin Couplers

Manufactured by: Kemtron Product Co., California, U.S.A.

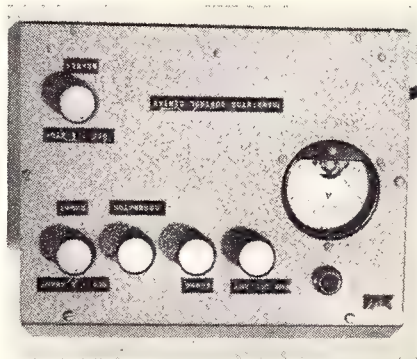
Price: Each pair approximately 5/- each.

For the modeller of the 1900 era, these couplers add a very realistic touch to your modelling.

The link and pin coupler was, and still is, one of the most popular couplers in the remaining logging lines, throughout the world.

These coupler pockets are very fine lost wax casting which require a minimum of clean up, hole is drilled for pin. The link is another casting with hole in each end. A little trimming and filling of each end of the link is needed to provide pocket clearance.

Other models available are a multi level type for loco fitment not illustrated. The pocket Part No. is top No. 30C, bottom M36 and the coupler link Part No. is No. 4a, the loco multi level Part No. is M37.



Transistor Cab Controller

Manufactured by: Martins, 89 Customs Street East, Auckland, N.Z.

Price: A£24/19/6 plus 11/10 post and insurance plus duty.

This throttle is similar in design and action to the throttle described in the December 1963 issue of this magazine.

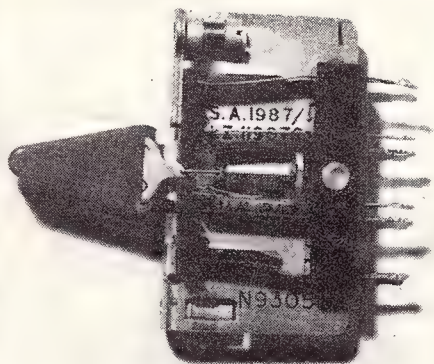
Two models are available, one is the throttle only without amp meter, transformer or rectifier. The one tested and illustrated above is a complete power pack ready to plug into the 240 volt AC and connect up to the track. In both cases 16 volt AC outlet is available for accessories.

The throttle has all the usual requisites of such a unit, delayed start, 2 positions, coasting control and a three position brake action. A shunting control for extremely slow crawling is a useful extra not found on most commercial units.

The most irritating feature of all throttles reviewed to date is the inclusion of a fuse for overload protection. Can't understand why manufacturers will continue this stupid practice. An overload lamp is convenient and more efficient and will certainly be less irksome in avoiding the replacement of fuses all the time.

Rating is good at 2½ amp although the system will deliver 3 amps plus at full short circuit. Seems safe enough for short periods.

Generally a compact unit giving good control through all phases of operation. Check on the duty angle before buying, if it's applicable, this could make the price a bit high.



Miniature Lever Keys

Manufactured by: Ericsson Telephones (Aust.) Pty. Ltd., 13 Botany St., Redfern, N.S.W.

Price: 23/- to 27/6 each depending on model, all plus Sales Tax.

The Ericsson miniature lever key is a compact well built key type switch of very pleasing modern appearance.

Mechanical actions available are—

Single Throwkeys: Locking or Non-locking.

Double Throwkeys: Locking/Locking; Locking/Nonlocking; Non Locking/Non Locking.

Spring Sets: Up to a maximum of twelve on each throw of the key, in two banks of six. Springs have twin silver dome contacts in moulded insulators.

Contact rating: Silver — 300 m A at 100 Vdc; Platinum 1.0A at 100 Vac or dc.

Key handle colours: 9 colours with 7 colour insert combinations. Handles are slip on type easily interchangeable.

Dimensions: Length 1½"; width 39/64";

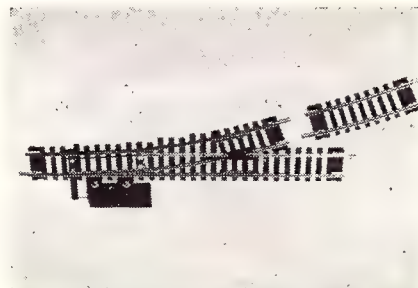
FOR THE PROTOTYPE FAN . . .



Probably no locomotive in the railway history of Australia has been more popular than the C.32-class 4-6-0 of the N.S.W.G.R. Designed in 1891 a total of 191 were put into service and are still working on the tracks of New South Wales.

depth to panel 1 11/32"; overall depth to top of handle 2 3/16".

Generally a well built key, a little expensive for popular use, but nevertheless very easy to operate, positive and versatile, excellent for the exhibition layout or the perfectionist. Send for catalogue P5907/4 issue 4 and General Technical detail sheet headed "NEW TYPE ETL Switch board keys Code, Type N9300 etc. Issue 3".



Snap Track Turnout

Manufactured by: Shinohara, Japan.

Price: Approx. 19/6 each.

This turnout is in the snap track class and is suitable for interchange with Atlas, Tyco and Athearn track and turnouts.

The rail is brass to code 100 specification and will connect to scale trackage.

The plastic ties are grained to resemble timber and are black in colour and have moulded plates and spikes to fix rail. Rail connection is attached to rail, and plastic frog is moulded in to give electrical isolation and the points are controlled by means of a manual switch screwed to the plastic base and is fitted with a simple slide switch. A solenoid type switch machine could easily be substituted.

A quarter 18" radius curve is included to convert from a turnout to a switch. In addition, this company manufactures quite long straights with and without terminal connections, 18 inch radius curves 12 per circle. The turnout radius is matching at 18 inch.

Bexley North Hobby Centre

14 SANSFIELD CIRCUIT, BEXLEY NORTH, N.S.W. 50-0468

WILLS FINE CAST LOCO KITS:

These are body kits only. Designed for Tri-ang & Hornby chassis e.g. LNER Pacific A2 fits Britannia £7/16/6, GWRUI fits Hornby 0.6.0. £3/2/9. Write for list.

WE HAVE A NUMBER OF TRI-ANG LOCOS SHOPSOILED BUT NEW AND GUARANTEED AT ONE THIRD OFF LIST PRICE.

CROWN ROLLING STOCK NOW 12/6, BE EARLY.

TO DEALERS . . .

THOSE DEALERS ALSO INTERESTED IN SLOT CAR RACING ACCESSORIES V.I.P., M.R.R.C., SUPER SHELLS AND OTHERS — contact:

Golding Model Supplies

123 CANTERBURY ROAD, BANKSTOWN, N.S.W. 70-6621

FULL RANGE OF TRI-ANG T.T.

3ft. Length Tri-ang Track 9/11

3ft. Length Gem Track 10/-

Gem T.T. Points 15", 24", 36" Radius

Crossings and Y Points.

A number of Kibri, Faller, Hoffman Buildings are suitable for T.T.

SHINOHARA TRACK AND POINTS, PECO, SENTINEL AND PECO "OOO".

FLEISCHMANN AND TYCO.

Hand Lettering Models

Those who construct HO models of Australian rolling stock are always faced with the problem of lettering them when they are painted, and as very few transfers are available it is almost a certainty that they will have to be done by hand.

Fortunately, no Australian systems go to the trouble of using their freight cars as advertising bill-boards, like many American railroads do; so that the amount of lettering on a car is usually fairly small and well within the scope of any modeller with a steady hand.

The materials needed are few, being only some paint of the correct colour, usually white, and some thinner for the kind of paint being used. You can apply the paint either with a pen or a brush, whichever you prefer, but if it is a brush, get a good one and make sure that it's the smallest pointed brush available.

Mix the paint thoroughly, and then tip a small amount into a flat tin lid or similar container. Take your brush and a piece of scrap material, and try a few letters on that. In most cases, paint out of the tin is much too thick for lettering, so thin it down, until you find that it flows easily from the brush, and you are able to make clear letters. Don't worry if the paint gives a thin looking colour, as this will make your letters appear weathered, and most prototype cars are like that.

Now you are ready to start on your model, and it will help considerably if you get something the same height as the car to rest your hand on while you are painting. A cigar box or a pile of books is ideal.

Start off with the largest letters, as it is more important to get these right, and if you do them first, you can wipe the lot off with a rag and some thinner if you spoil one, without spoiling a lot of other work as well. On Victorian cars, the largest letters are only six to eight inches high, and it is sufficient to make these readable, and to merely suggest the smaller letters by putting a small dot of paint for each letter, spacing them so as to look like words.

Thus, for a V.R. 4-wheel refrigerator car, the larger letters are the class letter "T", a number, and the load of the vehicle, which is "Load 15 Tons." All other lettering is merely suggested, and as such things as tare weight of vehicle, dates of last overhaul and various other information which is painted on the car would be too small to read anyway, our eyes accept a little splodge of paint as being correct. Don't think that this means you can leave all the unreadable ones off though — the difference those few splodges make is all the difference between a good model and a badly-lettered one.

Go for "O" at TITCHERS of Dandenong

In an endeavour to assist the long neglected "O" gauger, TITCHERS now stock, or will obtain U.S. prototype "O" gauge Steam Locos (MOGULS, C-16's including the D & R.G.W. 2-8-0 ORIGINAL, INTERMEDIATE & MODERN; the CP. HUNTINGTON, and the N.Y.C. NIAGARA).

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LIVEN UP THOSE TINPLATE LAYOUTS

By B. J. COTTER

How many of you fellows that are operating tinplate layouts, i.e. Hornby, Marklin or what have you, have it mounted on a permanent baseboard?... quite a few I would venture to say, but, what happens when they come to scenery?... nothing or very little anyway from what I have seen, and it wouldn't take very much effort to make a very fine looking layout of them.

There are many fine tinplate layouts around, and as for operation, well, perhaps, I have seen less derailments on them than I see on scale ones.

They are for the most part layouts on the basic oval design with buildings and streets, etc., laid out in a haphazard way, and every time you look at it, it looks flat. Why? Because it is flat; the track is laid flat, the buildings, etc., are sitting flat and all on the same level, so what more can you expect?

Now, if you have such a layout and a little time to spare, remove all your structures and take a good look at the available space, then make yourself a few wood formers of some desired shape and secure to various parts of the vacant spot on the baseboard, and stretch and tack wire screen over them, just like we do in the larger scale layouts, and described in the model railroad magazines.

They don't have to be too high... some only $\frac{1}{2}$ " or so, others up to whatever height you think that you would need, anything to avoid that flat look.

You can cover the wire screen with any plaster mix you like, or if you want to, and it works very well, forget the plaster and wire method and use paper mache worked over the wood formers. True that this work of making rough ground, may mean that you will not be able to get all those structures back again, but the effort will be well worth your while; some of the structures can be arranged on the higher ground; bring the high ground up close to the track in places and afford yourself a cutting for your trains to go through... what looks better than a train sneaking its way through a cut, the pleasure of only being able to see a little of the train at any one time?

Then the time comes to paint that scenery, don't go down to the hardware shop and buy that nice looking glossy paint; get the flat paint, or better still, get yourself some artists' oil paints — these can be thinned with ordinary turps and will dry flat, and the effect is much more desired than a gloss, which looks unreal at the best.

With the same paints (artists' oils) mix a thin stain of various greens and soak a quantity of fine saw dust; this will do fine for that grass around the layout; for a better effect vary the shades of grass.

Now, another thing that spoils that tinplate layout is the grade crossings, when you bring that road up to the track; bring it right up to the rail head then fill in that area between the rails, leave just enough room for the wheel flanges — in the case of centre third rail there is no need for any gap, just as long as the collector shoe still makes contact. A little thought is all that is necessary to bring the road up to rail-head height, you can use two balsa build ups. Give these a good heavy coat of glue, then sift yourself enough real earth (do this through one of your wife's nylon stockings) and spread it on — this earth is really only a fine dust, after sifting.

Now, before going any further, go take a good look at a level crossing and make a note of all the things that go to make it up, fences, cattle guards, signs, etc. It may be protected by crossing gates, and even a watchman's shanty — in this project itself, there is a wealth of modelling detail.

To further liven up that layout, some of those commercial structures are O.K., but, how about putting up a few of your own? No! it isn't as hard as you think, nor does it take long. There was once a chap who took an ordinary shoe box, minus lid, cut out the side windows that he wanted, and the end to make two doorways, then covered the sides with brick paper, painted the top (that is the bottom of the box) black, added old golf tees for ventilators, stood it over a couple of tracks and he had an engine house... over the top of each doorway he sooted things up a little. This was done by getting a cork and burning the end of it then wiping it on over the brickwork. Actually, he put more work and detail than this, but my idea is only to put you on the track of ideas, not to do it for you. This same procedure could be used if you have a diesel around the layout as the shape of a shoe box lends itself to a diesel shop even more readily.

The commercial structures can be painted again, to get rid of some of those overdone colors, and it won't hurt to dirty them up a little as weather does have a habit of doing this to things after a while, you know.

Let us go back to that level crossing for a while and see if it isn't possible to do a little more with it. First you can put in the approach fencing — this fencing can either be of wood or (as is done by railroads) old unwanted pieces of rail; you can have it looking as if it hasn't been up many years or have it broken through age, and those cars that used it to stop themselves, so that the train will not collect another careless victim.

It isn't hard to construct a STOP LOOK LISTEN sign. All that is needed

is a piece of wood or knitting needle, or what have you... and as for the cross arms, pieces of cardboard will do for this, with the lettering by transfer or you can use this as a means of practising lettering so that when the time comes to hand letter some of your rolling stock you will have the knack.

You won't want to forget those cattle guards, either, as they are really needed if you intend to stop those stray cows, etc., from straying onto the track, and these won't take you long to construct though a little care must be given to produce the desired effect. All that is really needed for this project is a few pieces of wood and cardboard.

I mentioned the use of artists' oil paints before, so I will tell you which colors to ask for and the best uses for those particular ones.

To get that earth color on your plaster, the best oils to use are burnt umber, burnt sienna, raw umber, raw sienna or Van Dyke brown... any or all of them can be used; just brush them over the plaster in changing tones; you don't have to an artist to do this blending as the plaster will do that for you; the color will spread and soak in to it in a natural way. For the vegetation you will have to do a little mixing but that won't prove hard; colors that you should have are medium chrome green, yellow, red and white. Varying the proportions of these colors will give you different shades of olive... green and white alone will give pale tones like those of willow; blue and green, deep tones of evergreens. I would like to give more detail of the plasters to use on wire screen for scenic purposes, but there are so many of them that I will only be able to give a couple here. Three parts of plaster, one part of whiting, mixed to a working consistency with a weak glue size (approx. $\frac{3}{4}$ lb. glue to 1 gallon of water); this is far more than you will want, but all you have to do is break down the parts to about what you will use; this is a reasonably slow dryer, but it will not keep. Another is to use asbestos mixed with sodium silicate (water glass) adding water to get the desired consistency; there are others, but whether you can get the ingredients is another thing. If you are not using wire screen then you could use this method and use up some of those old newspapers... stick newspapers together with a flour paste, cover with shellac and paint as before. There are a lot more things that I could mention, or I could elaborate on what I have already told you, but it is not my intention to go into the finer art of scenery, but rather to act as an inspiration to your own talents, because I am sure you could have thought of those things yourselves, only you wanted a little booster.

AN AUTOMATIC HALT

MATERIALS LIST

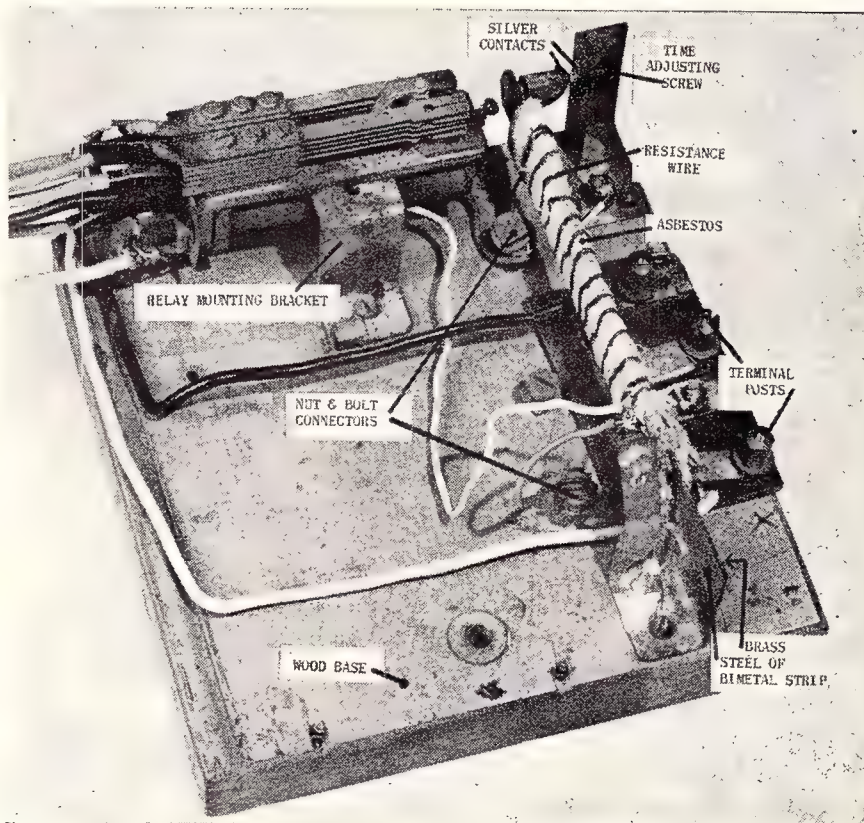
- 1 piece of dressed softwood 6" x 6" x $\frac{3}{4}$ "
- 3 terminal posts
- 1 piece of brass strip 1" x $2\frac{1}{4}$ "
- 1 piece of brass strip 5" x $1\frac{1}{4}$ "
- 1 piece of steel strip 5" x $\frac{1}{4}$ "
- 1 suitable mounting bracket for relay
- 24" resistance wire approx. 0.75 ohms/foot
- Odd insulated wire as needed
- 1 relay of 300 ohms with the following contacts:
 - two makes, one break, one changeover.
- A piece of asbestos cloth approximately 2" x 5"

The heart of this device is a bimetal strip which is simply two pieces of dissimilar metal sweated together. If one end of the paired piece is fixed and the strip warmed the unequal expansion of the two components causes a warping effect which, as the device expands, is used to break an electrical contact. On cooling the circuit is once more complete.

Take the smaller piece of brass and on its long side make a cut with tin-snips at a point one inch from one end half way across its width. That is, the cut is $\frac{1}{2}$ " deep. For the rest of the width bend the brass at right angles. Bend again along the length of the $1\frac{1}{4}$ " piece at a right angle. Solder the shape so formed to make the frame to hold the time adjusting screw as shown in the photo. With two screws fasten to the wood base in one corner as shown. Drill an $\frac{1}{8}$ " hole and sweat a nut over the hole avoiding any solder on the threads. Insert a screw in the nut. This screw is used to adjust the time that the halt will operate.

With the snips remove a 4" x 1" strip from the other piece of brass and discard. Make a bend $\frac{1}{4}$ " from the edge of the 1" tag which has been left, to a right angle and make two holes in this $\frac{1}{4}$ " piece to fasten it to the wood base. The piece of steel is now sweated to this brass strip along its full length. Fasten to the base-board. It is important that the steel be sweated to the correct side of the brass. When heated the contraption will warp in the direction of the steel side as brass expands more than steel.

With the present availability of cheap relays which can be adapted for use in railway modelling the modeller with very little electrical knowledge can take advantage of many simple circuits which will make the running of his railway much more interesting and realistic. One of these is an automatic halt which permits trains to stop at a signal or given point, wait for a predetermined time and restart without the operator having to touch his throttle.



Attach the completed strip to the board as shown on the photo. Mount the relay as shown. The previously discarded piece of brass makes a good bracket. Mount the three terminal posts as in the photo to the baseboard.

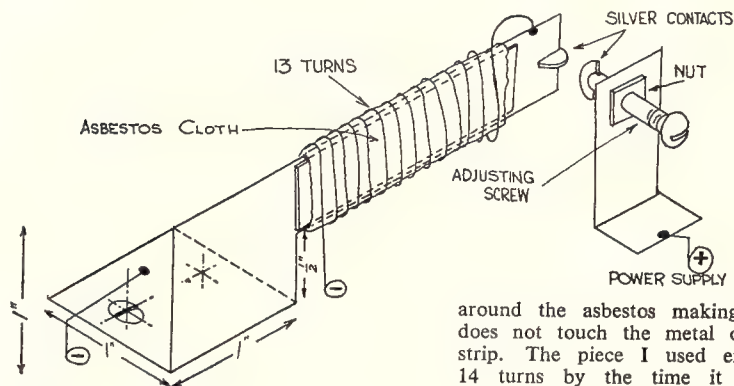
Now take the piece of asbestos cloth and wrap it around the bimetal strip, squeezing it gently to keep it in position. Leaving an inch or so for future connection, take the length of resistance wire and twist it

firm. It is necessary to use a nut, washer and bolt to connect wires to each end of the resistance wire as it is not possible to solder another wire to it. These connections can be seen in the photo.

The free end of the bimetal strip and the adjusting screw have small pieces of silver soldered to them so that a good, non-corrosive, contact is made at this point. It should not be necessary to point out that it is an offence to use pieces of silver coinage for this purpose.

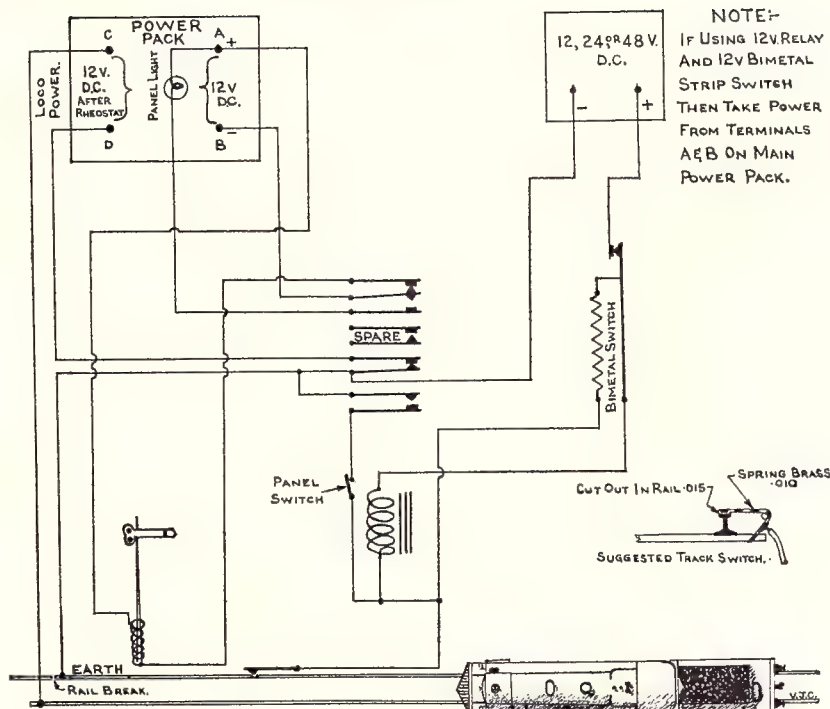
Now wire up the device as shown in the wiring diagram. Put the track switch about two yards down from the isolated section where the train will come to a halt and the signal at the far end of this section. A suggested track switch is shown in the diagram. Another type I have found useful consists of a three inch piece of rail laid just inside the running rail, in the manner of a guard rail, so that the passing metal wheels of the locomotive will carry current from the short section to the main rail.

It will be noted that there is a spare pair of make contacts in the relay. These can be used for many purposes such as blowing a whistle, operating extra indicator lights or another signal further down the track.



around the asbestos making sure that it does not touch the metal of the bimetal strip. The piece I used ended up with 14 turns by the time it came to the other end of the strip. Make sure it is

AUTO-HALT.



NOTE:-
If using 12V RELAY
AND 12V BIMETAL
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We are keeping small stocks of OOO (N) as and when available. Good for HO N2½.

Hambling and Romford wheels available loose or fitted. Send in your loco. chassis. Also worm and worm wheel sets for more prototypical speeds. MHG components from Sentinel, if you have the courage to tackle the louveres!

MOTORIZING THE AIRFIX PRAIRIE TANK LOCO

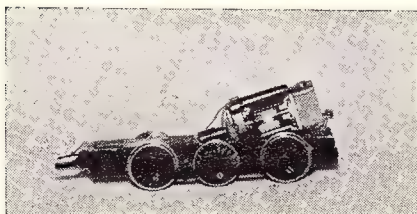
By CEC. PALMER

I had always considered that building an operating loco was a difficult task, but having followed Jack Grierson's excellent article, I found that constructing his "18 Class" was quite straight forward.

Motorizing the Prairie Tank is similar to the method of chassis construction used in the "18 Class", without the time consuming fabrication of brass body parts.

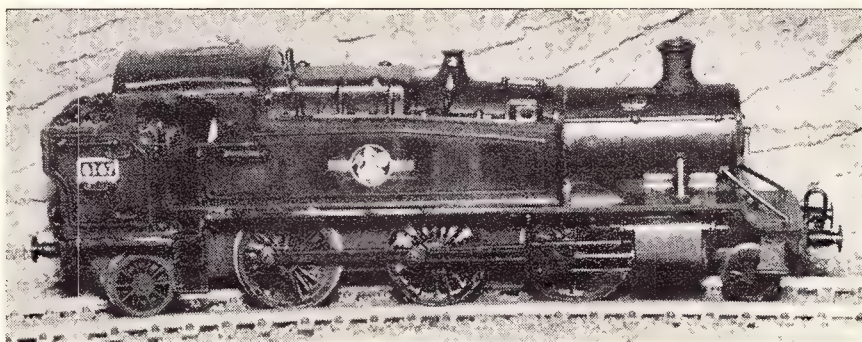
Firstly we have a parts list:

- 1 Airfix Prairie Tank Kit
- 6 Romford 20 m/m insulated drive wheels
- 3 Romford axles and nuts (centre wheels should be flangeless)
- 1 pair of Romford 40:1 drive gears
- 1 Tri-ang motor
- 1 length of $1/16" \times \frac{1}{2}"$ brass strip
- 10 B.A. screws and washers
- Tri-ang phosphor bronze pick-up assembly.



The body section of the plastic Kit can be assembled, but not yet cemented to the footplate, also delay cementing the imitation coal to the bunker, as this section can hold lead weights. The inside of the boiler is also filled with lead. I found that 160°F melting point alloy is perfect for this (obtainable from O.T. Lempriere and Co. of Sydney).

Using a plastic chassis side as a template for shaping the brass can be easily done if the inside projections are filed flat. Two pieces of $1/16" \times \frac{1}{2}"$ brass are cut to the correct length and soldered lightly together. The plastic side frame



is laid on top, and the shape outline is scribed on the brass. At this time the axle bearing holes are spotted and drilled $\frac{1}{16}"$ diameter, also holes are drilled for the pick-up assembly.

Two brass spacers are soldered between the side frames near each end to the exact width of the original plastic ones. Next, the drive wheels and gear which drive (on the centre axle) can now be fitted and tested for accuracy on a piece of plate glass.

The Tri-ang motor needs little modification, excepting to enlarge the bottom mounting hole and tap $\frac{1}{16}"$ whitworth. The small brass lugs need cutting off, and the rear end mounting lug is sent down slightly.

Removing the Tri-ang worm gear can be done by holding it tightly in a vice between two pieces of soft wood and tapping the shaft out. The Romford worm gear is screwed lightly in position, not forgetting the thrust washer to limit end play.

The motor assembly is next fitted between the side frames, the front section being in contact with a brass spacer piece. This should first be drilled with a $\frac{1}{16}"$ hole to take the motor mounting screw, which allows micro-adjustment of the gear meshing for smooth running.

With the worm gear meshing the gear wheel, drill through the rear motor mounting lug, which rests on the rear chassis spacer, and bolt together with a 10 B.A. brass bolt. The front brass mounting piece is pressed firmly into correct position and securely soldered, after removing the motor and wheels to prevent heat damage. By using phosphoric acid as a flux, soldering is quick and easy.

Two $\frac{1}{16}"$ holes are drilled near the front and rear insulated drive wheels, and pieces of phosphor bronze are screwed in position as electrical pick-ups. The holding screws are insulated by small pieces of plastic tubing cut from flex wire.

I now cut the footplate to allow the motor to fit up into the body as well as removing some of the plastic cab front material. The foot plate is now cemented to the body, and at this stage can be placed over the brass assembly for testing of motor clearance.

The plastic cylinder assembly is cut from the side frames and cemented to the main body footplate in side contact with the chassis, thus allowing the latter to be removed easily for servicing the motor, etc.

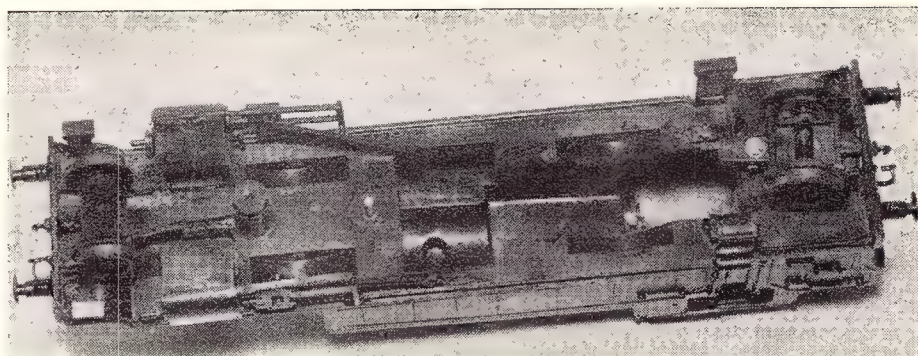
I decided to use the plastic side rods as supplied, but if desired these can be used as templates for brass ones.

Holes are drilled through the drive wheels, and tapped to take the threads of fixing screws selected. I have used optical screws for this purpose. Small 10 B.A. brass washers are fitted between all moving parts of the side rod ends, making sure that no binding occurs.

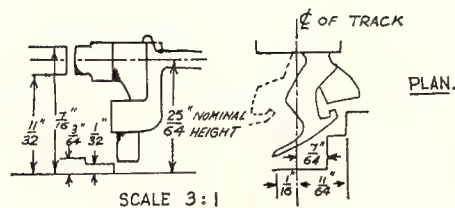
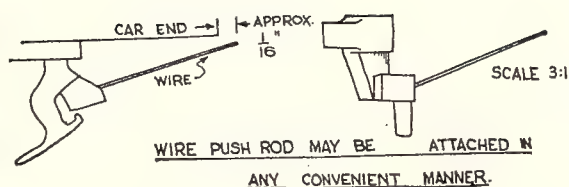
The front and rear plastic pony wheel assemblies were fitted and small pieces of solder were cemented on to add weight to these. The wheel flanges should be reduced to run on fine scale track at this stage.

When the pick-up wires are attached to the motor, the drive mechanism can be tested for smooth performance.

If desired, the model can now be painted and added to the loco stud, after weights have been fitted to give good traction.



X2F COUPLER MOUNTING PROCEDURES



Many modellers are using X2F couplers on their rolling stock and every now and then there are complaints that the couplers do not function perfectly. Careful investigation in all cases has shown that the couplers have not been mounted according to the standards set out by the N.M.R.A. Coupler Development Committee. Those who have had any difficulty may like to peruse the mounting procedure set out below.

One of the primary objectives set for the development phase of the programme was that the coupler requires little or no maintenance. This called for rugged construction and wide tolerance of misalignment. The X2F does have a greater tolerance of misalignment than any other. However, if most of the tolerance is

used to permit wide variations in mounting, little would remain to guarantee operation over tight curves or rough track or as the equipment aged. By holding the mounting position within reasonable limits, the wide tolerance of this design will permit better operation than has been known before. The installation limits given below are based on experience in actual operation. Limits are given rather than customary nominal values to take the guesswork out of the permissible variation.

VERTICAL ALIGNMENT

Top of knuckle not to be lower than a gauge $7/16$ " above the top of the rail nor the bottom of the knuckle higher than a gauge $11/32$ " above the top of the rail. The length of the un-

coupling pin shall be adjusted so that it clears a $1/32$ " gauge above the top of the rail but strikes a $3/64$ " gauge.

HORIZONTAL SWING

Coupler shall be free to move on its pivot and when in the normal uncoupled position, the knuckle shall clear a $11/64$ " gauge from the centre line of the track but strike a $7/64$ " gauge. When at its extreme swing to its right, the knuckle shall clear a gauge $1/16$ " from the centre line of the track.

MANUAL UNCOUPLING

When manual uncoupling is desired, that is without the aid of a ramp, a wire as shown shall be attached to the pushing face of the coupler. Uncoupling is accomplished by pushing the ends of the wires on the mated couplers.

ATTENTION—All Members of the Southern Cross Region

It has been brought to my attention that some members of the Eastern Division have not been receiving their membership cards since about September 1964.

I want every member irrespective of his Division to write to me (this once) direct, and immediately, if he has not received his card. At the same time I want to know his name, address (these in block letters) his date of joining or renewal date and to whom he sent his money i.e. the States, R. Siddall, myself or any other person, and how much was paid. If I don't hear within one month of this being published I shall assume the person is in receipt of his card and satisfied with his membership.

Let me explain a little of the workings involved.

The S.C.R. President appointed me as Membership Chairman for the Region and I work at that level. So that divisional members can operate they appoint persons to do divisional duties. I request them to nominate somebody to handle their membership matters. On receipt of the person's name I can then appoint him as a Divisional Membership Committeeman if I think he is suitable. That is my prerogative. It is his duty to attend divisional meetings for any discussions relating to membership matters and then to report same to me so that they may be dealt with on a Region basis if the matter warrants such a move.

I could attend a division meeting, or a committee meeting if asked, as an ordinary member only. I could not

discuss division business on membership; that is for the division's committeeman. If I wanted to complain about some aspect of divisional membership I would have to do it through the committeeman so that his division's officers shall know what is happening or what the complaint happens to be. That is only courtesy to your elected officers.

I want this understood once and for all, that any complaint must go to the division's committeeman handling membership, who can discuss it with his officers who can then ask him to discuss with me if they cannot take the necessary action. I would like some spare time with my family once in awhile and not be spending every Sunday typing letters to all and sundry.

To the members of the Eastern Division, I have this to say to their complaint which rightly came from their officers.

Action has been taken to remedy the matter that they have complained of, but why has up to six months in some cases gone by before any complaint is lodged to your officers? Only one letter reached me direct on this matter, to which I replied immediately and stated the procedure which I have just mentioned. He must have been satisfied as I heard nothing further from the member.

The appointed committeeman has been relieved of his position and an explanation asked for along with a demand for the return of all cards and records.

You see, each month I send, to the committeeman, a list of all the new

members, renewals, change of addresses along with the made out membership cards, which he is then supposed to distribute at the next meeting of members. Those which cannot be issued in this manner should then be posted to the members concerned. He is expected to keep a record of his expenses which are submitted to the Treasurer each quarter for reimbursement.

I have appointed a new committeeman who will look after after the Eastern Division's membership matters. Give him a fair go as it is not of his doing that you have not received your cards.

I list the name and addresses of each Division's committeemen. Write to him on the matters of membership, but send to me your membership dues for the N.M.R.A./S.C.R. Please do not send them to Russ Siddall in Melbourne; he's got enough to do as it is.

DIVISIONAL MEMBERSHIP COMMITTEEMEN

CENTRAL DIV. (Dr.) M. Wallace,
27 Ontario Ave., Panorama, Sth
Australia.

SOUTHERN DIV. (Mr.) P. Jeffery,
33 McDowell St., Greenborough,
Victoria.

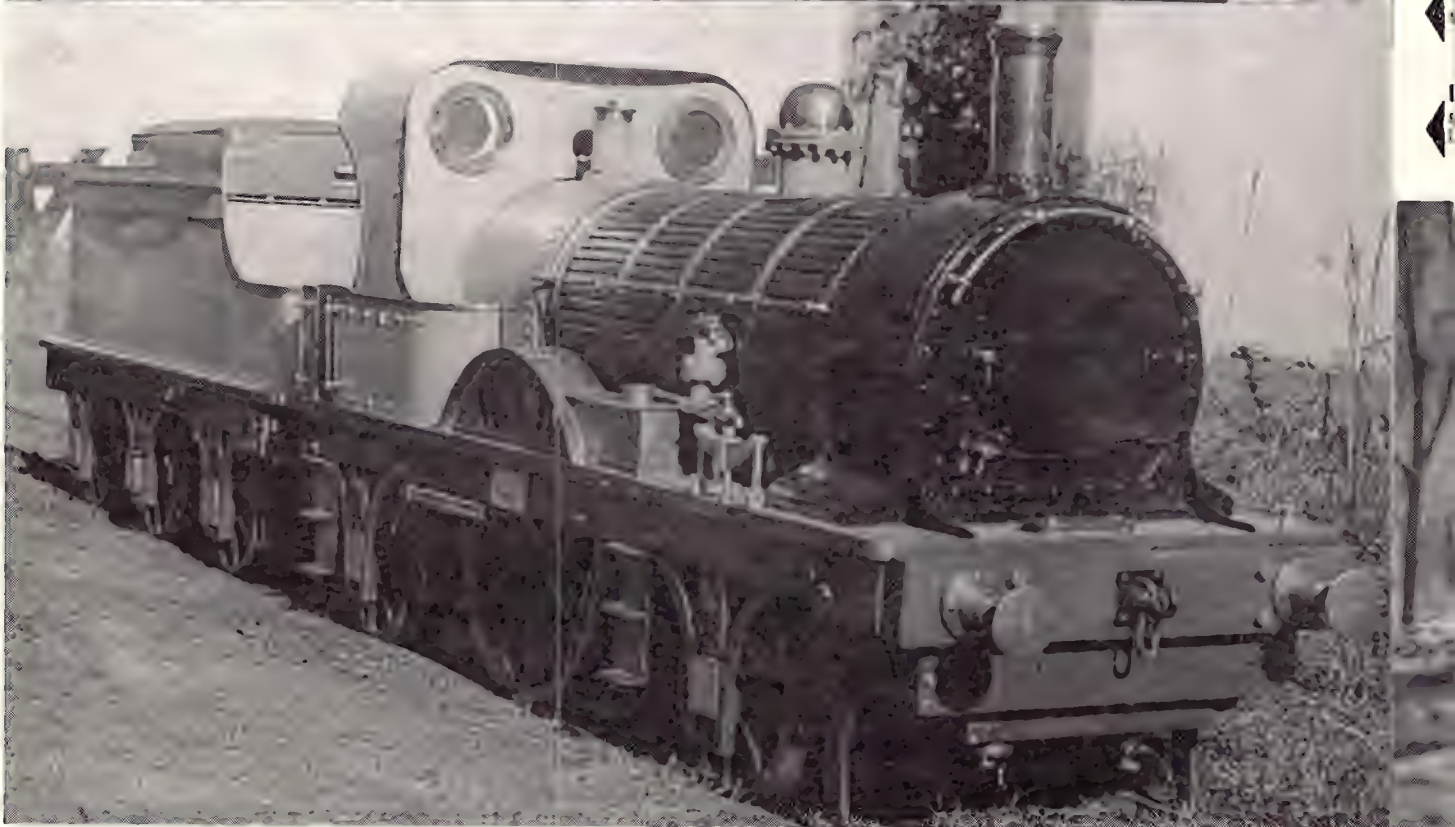
EASTERN DIV. (Mr.) I. Sherington,
14 Shinfield Ave., St. Ives, N.S.W.

SUNSHINE STATE Div. (Mr.) D.
Sheehan, 68 Mearns St., Fair-
field, S3. Queensland.

F. A. MAXWELL,
S.C.R. Membership Chairman.



the scenic route





FT: Here is an interesting prototype project. A Signal & Tele-Branch Workmen's Van. Just the item for the scratch builder.

A LEFT: Barry Brown forwarded us this photo of this 2-2-2 12 inch scratch built loco built by Mr. Sam Mears, of Arncliffe. Sam is a member of the S.S.M.E. Ltd. and his loco may be regularly seen at Exhibition Park Ashfield where it hauls 20 passengers.

TOP RIGHT: Ian Petherick, of Hampton, Melbourne, is the owner of this well detailed old time layout. Other photos of this layout have appeared in past issues. Note the extra rail for dual gauge HO track.

BOTTOM RIGHT: Ellis Eyre is the modeller. Scene looks full of interest. Would like to see more from Ellis. I can't tell you much about this layout as I only have two photos with Ellis' name on the back.



PINE TREES BY THE DOZEN

By J. M. WHEELER

This process has been featured in the past by many overseas magazines so it is not new; however, many Australian Modellers will not have seen it in these magazines.

The materials required are simple, just a piece of cedar, glue and asparagus fern. Tools required are a rasp, razor blade, saw, tweezers and two drills Nos. 68 and 56.

Before proceeding, it is necessary to preserve the fern by soaking the pieces in a mixture of water and glycerine, about 3 to 1 would be suitable. Leave soaking for 12 to 24 hours. The glycerine will be absorbed into the fern and keep it supple for a long period. After removal set out on a blotter or towel to dry.

You are now ready to proceed as follows:

Step 1: Prepare the trunk by cutting the cedar into pieces about 3/16" to 1/4" square depending on tree diameter and length. I suggest that trees in the foreground could be thick and tall, whilst those

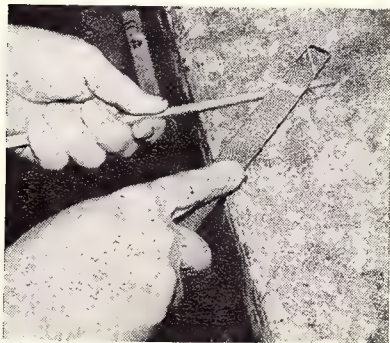


PHOTO A.

further back and up the mountain side may be shorter and thinner. The tree illustrated is about 2 feet in diameter and 60 foot high. The foreground tree is about same diameter and 45 foot high. To curve the trunk of this tree I glued a short piece of the square timber to the main stem and then filed the trunk to shape. Photo A shows the shaping process. Lay the timber on the bench and file with wood rasp rotating the timber as you go. The rasp leaves the trunk realistically rough and the cedar colour most realistic. If you use other timber, colouring will be necessary. Here you could stain with a thin wash of grey, brown and white.

Step 2: Cut up Asparagus fern as shown in photo B. Notice I have graded the pieces into three sizes for convenience later, these are illustrated in the background.

Step 3: Drill trunk with holes at right angles to each other all the

way down stem to within 6 feet of bottom. Start off with a 68 drill at top and as trunk thickens change over to a 56 drill. The holes are drilled right through and each pair at 90° should be fairly close to each other, however, spacing can be irregular. Pine foliage is normally pretty thin on top and thickens up further down, use your own judgement here, anyway you have lots of licence.



PHOTO B.



PINE TREES BY THE DOZEN (Cont.)



PHOTO C.

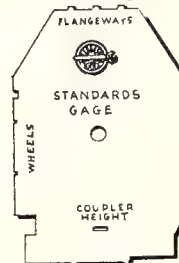
Step 4: Having drilled all the holes we can now procede to glue in the branches. I used aquadhere for this job, put a little on a board, then pick up the fern pieces with tweezers, dunk the stem in the glue and insert in hole in trunk. Vary the size piece of fern as you go and if necessary thicken up by putting two pieces in each hole or just glue a second piece on top. Photo C illustrates.

Step 5: Leave tree to set and then drill hole in stem from below, insert nail with head cut off, drill hole in scenery and insert.

Step 6: Using plaster or plastic wood, you can, if you desire, model the root system around base of tree.

Repeat until you have enough trees. Each tree takes about one hour and costs almost nil. Result a very realistic tree. Why not try using other types of local material for foliage. Experiment and let us know the results.

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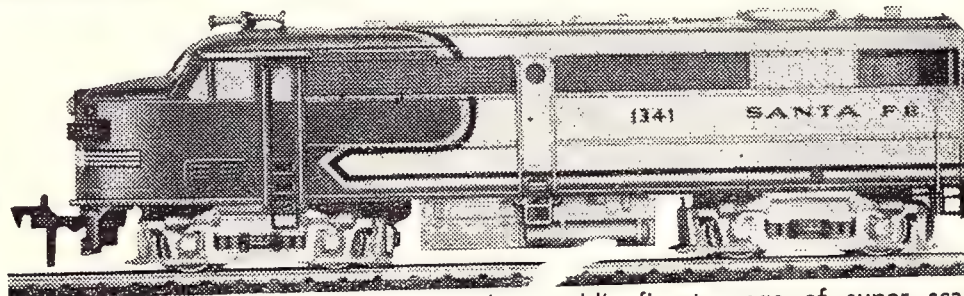
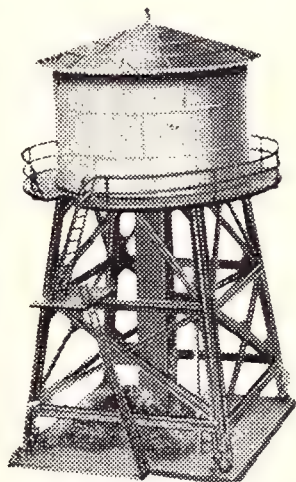
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A NEW PAINTING TECHNIQUE

By W. J. CHRISTIE

I have used the word technique really for want of a more suitable word, yet in a way it describes the idea pretty well. The idea came to me while looking through some photos of old Cheyenne and other old time towns in the U.S. which I have in my possession. Before going any further their idea holds good for all eras of model building so all could benefit.

If you get hold of any photos taken of towns from a high vantage point it will be clearly seen that shadows on side walls contrast with the front wall which faces the sun. This then is the basis of my idea, not new I know; but how many modellers put this idea into action?

To achieve this effect it will be necessary to use two tins of the one colour, the first tin will be in the original shade, while the second tin will have either white or black added. Before beginning the paint job some thought must be

given to the desired effect.

From my own point of view the effort necessary to get a "sun and shadow" effect on my buildings would require a tremendous amount of work beforehand. However, a compromise can be reached which gives a far more subtle effect. Right now let's get down to the job.

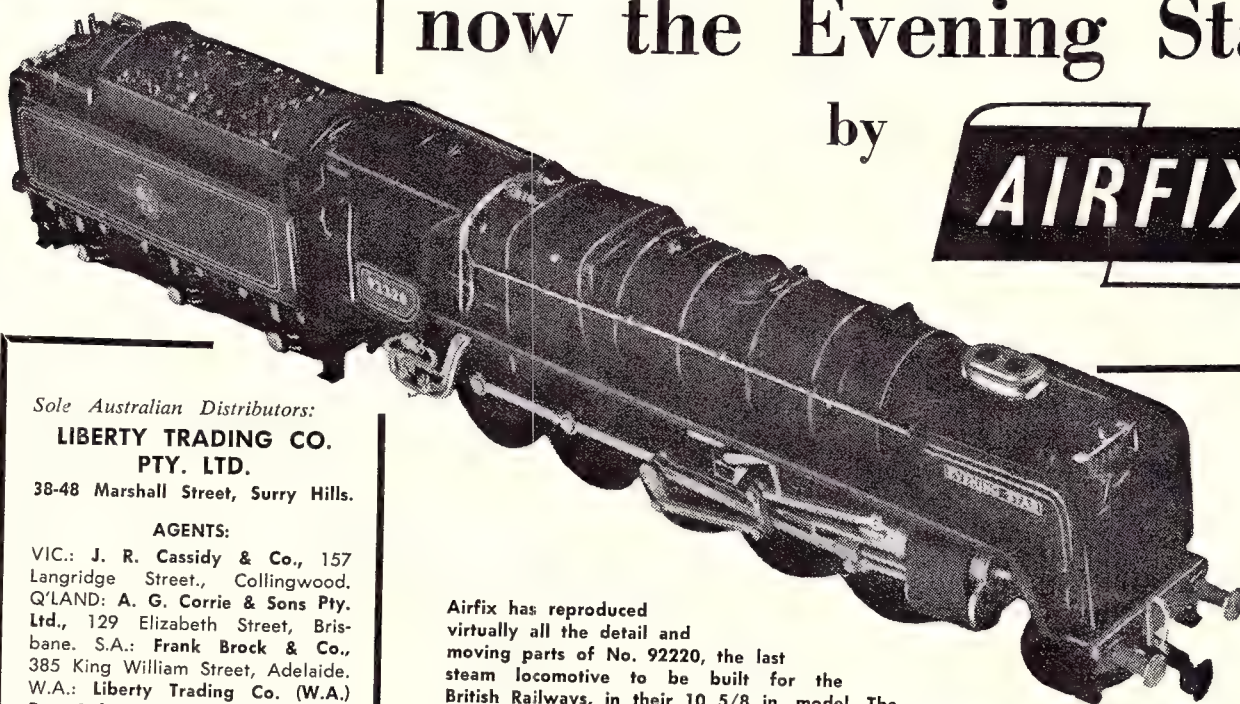
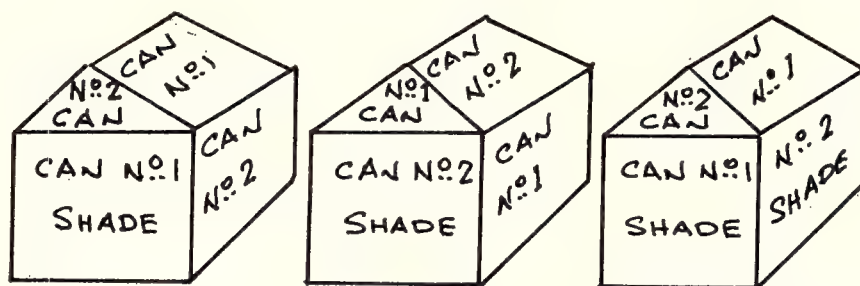
Can No. 1 (original colour) is applied to the front of our building from edge to edge, next we apply can No. 2 (altered colour), this is applied to the side. This second can is several shades removed from the original and is painted edge to edge of the side of the building. The rear of the building will use Can No. 1, while the remaining side will use Can No. 2.

The roof (other than a flat roof) is next for duty and here again we use the "two can technique", but caution! If the front wall of your building is painted in the original colour — Can

No. 1 — then the roof area above it should be painted with the No. 2 can of the roof colour.

If the entire operation has been carried out using subtle shades, the overall effect will be easily seen. All buildings will stand out clearly and a very pleasing overall pattern will emerge, especially if adjoining buildings are painted in relation to each other. (See sketch)

The footpaths surrounding these buildings can be treated to the same idea, using one shade of grey along the entire length of the group of buildings, with a darker shade for the sides. The colours to be used will depend on the individual and on the prototype being modelled, the full use of this technique will be best seen where there are several buildings in a row. One effect, if you photograph your layout, will be that the buildings will be clearer to the eye and will stand out and be more readily identified.



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HOW TO FILL A TRAINCASE OR $\frac{1}{2}$ A SCALE MILE OF HEATH ROBINSON

by SPIKE DOG

Many less fortunate modellers must find themselves in the predicament that I am in, namely, how to reconcile a desire to own a rail empire with a necessity to keep everything very, very portable. Being a serviceman has its drawbacks besides squarebashing, not the least of which is a dislike among the higher echelons of troops embarking on a career of rail empire building, with its inherent prerequisite of space. Therefore, in order to thwart these opponents of "The Model Railways Act 1844 to Evermore", I adopted the subterfuge of The Great Traincase, not to be confused with The Great Train Robbery Case.

Mine is an HO type traincase having thirty two feet of track, or just over half a scale mile. The Barracks carpenter built it for me, and I set it up on my side locker and peered through the perspex front at the half scale mile of, as yet, devoid shelves.

Being an admirer of the antiquities of the Q.G.R., I resolved that a fair length of track should be graced by the rolling stock of that fair State. However, I had 20 pairs of Kadee Magnematics and 20 pairs of Athearn Bettendorf trucks which had to fit into the scheme somehow. I model the 1910 period which makes it difficult.

My dilemma was solved by the announcement that the Thiess Peabody Kiangra Coal Railway was to be constructed to 4' 8½" gauge. I was pleased at this, thinking I would be able to run true Queensland prototype on HO track, building the line as it would have been in 1910. Unfortunately, when I had committed myself irrevocably to this prototype, they narrowed their thinking to 3' 6" gauge, leaving me with a model of the railway that would've been, and nearly was, but wasn't! I might just as well have chosen to model the Union Pacific, which I liked all the time anyway.

To avoid rapidly amassing a lot of immobile equipment, I decided to build as much as I could from scratch. Accordingly, I searched the magazines for a suitable prototype, finally settling on an admirable Nickel Plate outside braced wood coal hopper of 1910 vintage. I thought 10 of these might be enough, so, after many many long hours, I completed the 10, laid track on three shelves and installed my babies.

At once a discordant note was struck, for I found to my chagrin that four hop-

pers would fit on each of the first two shelves, and two on the third, making an asymmetrical arrangement aesthetically displeasing. I emphasise the adjective aesthetically, for this is, of course, the only type of enjoyment I can get from a completed model in a traincase.

By this time, news of Thiess Peabody's fickleness had reached my carshops. In order to keep full employment, I embarked on a program of building five skeleton log cars. Anyone who has built 10 Nickel Plate outside braced wood hoppers will sympathise with me, as about a year's work had filled but 15% of my traincase. At this rate it would be filled by 1970! I wasn't going to repeat the debacle of the asymmetric coal hoppers, so I measured the length of a shelf and divided it by five, to give me the length of each log car.

This blatant use of artistic licence is justified by just about every magazine article on skeleton log cars, which usually say something like "These cars were of no fixed length, breadth, depth or gauge, sometimes having different gauge trucks on each end or even no trucks at all". This example is from the "Pinchgut Model Railway Monthly" of June 1899. These five skeleton log cars were completed on schedule, although we were using a skeleton staff because some employees were sic (sic).

By this time I had acquired several other items of rolling stock, namely a blacksmith's car, a depressed centre car (this car started as a flat car, but I accidentally stepped on it), and one of those excellent Bill Coles SAR reefers, which, just to be original, I painted red and lettered "Explosives". I had also obtained a Tenshodo 0-6-0 and a Kumata 0-4-0 plantation loco which I modified to an 0-4-4 type. I decided to place the 0-6-0 at the head of the coal hoppers. This gave me a train consisting of an 0-6-0, 10 hoppers and a caboose (which I tailor-made to fit the available space).

This train then neatly fitted the first three shelves. Shelf four was filled by the skeleton log cars. Shelf five was filled with the miscellaneous rollingstock mentioned earlier, except for an embarrassing gap at the end. It was too short for the 0-4-4, and I found it would take one bogie and a single wheelset. Such an unlikely combination might be thought to be a rarity in the railway world, and such it proved to be. However, by dint of careful searching, a prototype was

found, in the form of a clerestory roofed hot metal car in the April 1872 issue of the "Pinchgut Model Railway Monthly".

Unfortunately, it was only after I completed the car that I found part of the page was torn out, thus converting one truck into a single wheelset. Stiff! The torn out piece provided the plans for the clerestory roofed single wheelset hot metal car on shelf six.

Passenger traffic had to be catered for, I realised, so, one long weekend, I constructed two Big Boys and a shorty car out of parts from my junk box. These I connected up as a snazzy push-pull set. By these means, I had filled half of my traincase, except for about half an inch on one shelf. This I filled with a handcar stood on its end.

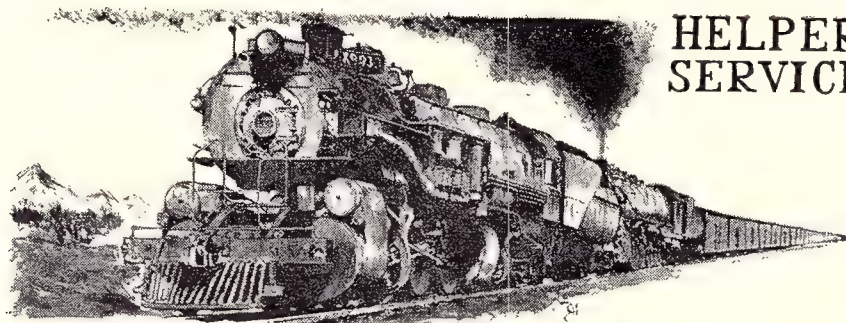
I now embarked on the side of my case dearest to my heart, namely, the Queensland Railway side. Anyone familiar with the Q.G.R. in 1910 will know that the modern (sic) rolling stock of today was unknown. The motive power consisted of one Boer War surplus horse, the less said about which the better, and the rolling stock consisted of cut down beer barrels with flanged wheels and an out-of-gauge rail uni-cycle. This sorry roster was modelled in its entirety in less than one hundred manhours. An eohippus was obtained to act as the motive power. (Note at time of publication, this poor creature had deceased due to the barracks being fumigated to eradicate eohippuses.)

All previous asymetrics paled into insignificance when this little lot made the traincase scene. However, these little problems have a way of solving themselves. This one was solved by my second cousin twice removed going live steam and giving me his entire collection of guided missile cars.

These filled the traincase with their ugliness and my mind with revulsion. However, my traincase is now filled, and is an object of wonder to all who gaze upon its treasures. There will, of course, be those who will criticise my methods, but may I remind them that there is a prototype for everything.

I hope these notes will provide guidance to anyone interested in this facet of our great hobby.

I would like to point out that I have absolutely no connection with any of the firms mentioned in this article and, no doubt, they would like to make it known that they have no connection with me.



HELPER SERVICE

MODELLERS. What are your problems? Write to this magazine and we will endeavour to put you on the right track.

Q.: My son has just received from a relative some quite old Hornby gauge 'O' trains. Do you feel that we would be wise to set up an 'O' gauge layout? We have no great preference for this size, and in common, presumably with many, suffer a space problem. — R.G.M.

A.: I think "no". Space will certainly be a consideration, and obviously you will be able to have a better "empire" in HO. As has often been said, the best range of equipment is certainly in HO, and while you might like to keep some of the better pieces for show and historic interest, you will find no dearth of collector buyers for the 'O' gauge — people who have, say, garden layouts — and the price obtained will set you up in HO with up to date equipment, and let you get operating from the start. Probably all the 'O' gauge gear will need attention, which will take time and need very hard to get parts, and particular attention is drawn to the power pack some of which even when new were plain lethal, and with perhaps 30 years of cable rot, you will almost be able to see the mains current going to and fro — certainly you might feel it! Very likely you will find some shops who will be able to accept the 'O' gauge equipment as trade in on new HO gear, and such a package deal, will have as a bonus, the very valuable guidance of the knowledgeable hobby shop personnel.

Q.: Where in Australia can scale TT gauge locomotives and rolling stock by H.P., Lionel, Kemtron or other such people be obtained? Can they be imported privately or what price would be charged for say a 4-8-2 Mountain loco and tender kit at \$33.50 and a car kit averaging \$4.00? — T.H.

A.: First we'd better qualify TT and the term scale. There are umpteen TTs, and one of the best known in Australia, in name that is, Tri-ang TT, perpetuates the U.K. OO/HO errors of rolling stock with overscale bodies (see earlier issues). TT stands for table top, and yet the first use of the term that I recall was by Hornby-Dublo way back in 1938 when good mass produced small models "arrived", although of course they were really OO (U.K.). At that time, Marklin and early Trix were HO — and still are — and early experiments in TT started well before World War 2. However, as usual, the North American continent appeared to have the good sense to set up their smaller than HO models in a reasonably true gauge scale relationship, but in spite of this TT in America has never enjoyed great popularity.

Consequently, North American TT brands are not well known, so to answer your question, probably nowhere will you buy TT by the company brands mentioned at all easily. It would appear that Tri-ang, while at first making great strides in U.K. TT 3 (i.e. 3mm to the foot) do not intend to do much more, although not much has been stated in the model press or to detailers on this matter; it is noticeable that TT does not appear in the current 1964 Tri-ang catalogue. People like Gem and Peco have offered excellent track systems for TT3 to a gauge of 12.5mm, but so far all these U.K. products have been fitted with coarse wheels and therefore do not qualify for the term (also see earlier issues).

Europe would now seem to be the home of TT and generally with a scale of 24mm to the foot the models have a reasonable scale relationship; however, once more wheels are extremely coarse and track is hi-rail to the nth degree. Rokal and Zueke are well known manufacturers of TT on the continent.

So if you want to have a generally TTish layout the best course would be to set a standard for yourself having due regard for the existent standards of the brand that appeals to you most. Then make what alterations that you deem desirable, and from then on reckon to convert to one usable whole, playing the field of brands.

One final point to make is that HO at a scale relationship of 34mm to the foot does not take up much more space than TT3, and if area is your problem, it might be well to consider OOO, or N as the continentals call it, (Lone Star, Arnold Rapido and Minitrix are well known at least in name, not to mention Peco OOO Streamline, which we have found to be very excellent), or to model a narrow gauge system in HO, which will permit the inevitably sharp curves with a greater degree of realism. Don't forget that Queensland for example does happen to have a quite extensive narrow gauge railway, opps, I nearly said railroad, system, and also a cane tram or logging line would be very nice to see illustrated in the 'Scenic Route'.

Now to price. For quick figuring one can say that there are 2 U.S. Dollars to the £A, and the slight over estimate can allow for postage etc. Counter selling prices in Australia for U.S. articles vary greatly, due primarily to the trading set-ups offered by the U.S. maker, and we can sight instances of rates of around £A1.70 down to around 6/- for the dollar. It must be remembered that our Federal Government takes a considerable share of the end price, with sales

tax at 12½% and duty at 45%, and while these figures may seem high, and without getting politic, their existence is inevitably part of the Australian way of life, and must be borne, for the present at least. If you buy direct, you cannot anticipate any after sales service on a gratis basis from retailers or agents, indeed there is some justification in a feeling of disgust on the part of these people.

Many modellers are quick to criticise their retailer when he doesn't have a spare for this or that, or articles of a given brand for extension of a perhaps new system that "uncle brought back", but this all too common chip on the shoulder gets nobody anywhere. Remember the agent, wholesaler and retailer want to eat regularly and to do this need you as the public, to buy in Australia. We feel in this type of situation we can submit a slight admonishment to the modellers themselves, and suggest they ask themselves if sometimes it may be a case of the grass over the fence appearing greener.

Q.: Having received a Tri-ang train set for Christmas, we now have a mixture of this and Hornby Dublo two rail equipment. What steps should we take so that our trains can work together? — B. Sommers, Chermiside, Q.

A.: Probably most, if not all of your Dublo track is nickel silver rail, not steel, and as this is interchangeable with other makes like Peco, Fleischmann, Atlas, we recommend you dispose of the Tri-ang track, as it is interchangeable with nothing else. As you are in a locality of fairly high average humidity, the steel (Tri-ang) track would also be a problem with rusting, anyway. As to couplers, you have no doubt already realised how superior the Tri-ang Mark 3 couplers are, to the Dublo Simplex ones, and we strongly recommend changing your present Dublo items to Tri-ang couplers; as the Tri-ang coupler is low mounted you will find it quite easy to fit them to Hornby Dublo, but check against buffer locking.

Q.: Do you know of a three link coupling available in Australian hobby shops? — D. Evans, Kalgoorlie, W.A.

A.: As most modellers find using three link couplers tedious, they are, as a rule, only fitted to locos and vehicles, for appearance. We know of no respectable three link coupler at all; the majority are very much overscale, and in one case tested, the lower link actually hung below the sleeper level, rather fatal over points! One individual is cited all of whose rolling stock and locos have three link couplers, and all have been hand made; this person assures us that this was the only course for him, and he admits he doesn't like hard work!

Q.: For the transistorised throttle described in the A.M.R.M. last year, would this be suitable for running Tri-ang locos, from a normal 12 volt D.C. transformer? — John Hall, Kyneton, Vic.

A.: Certainly the improved degree of control from this unit may be applied to Tri-ang locos., although as mentioned the characteristics of each model will vary; this will be particularly obvious between say the Brush Diesel and a Hiawatha, due to the very different motor and drive arrangements. The last few lines on p. 18 A.M.R.M. Dec. Jan.

63/4 still apply however, in other words you won't get good results from your 12 volts D.C. supply. Also remember, no throttle is a cure for dirty track, bad rail joints, worn motors etc., and with Tri-ang track, scrupulous cleanliness is essential. Make certain that you are enjoying the best possible performance from the equipment already to hand.

Q.: I do not seem to get good results when soft soldering on ferrous metal using paste flux. Is there a better flux? — N. Quimby, Atherton, Q.

A.: Paste flux is ideal for non ferrous soldered joints, but for ferrous work, acid flux is much better. However, this type of flux is highly corrosive, and when the iron is applied the solution boils, and spatters quite a distance, with a really rusty result in a short time. We suggest you try undiluted phosphoric acid, available from your chemist.

Q.: Are B.A. screws available in Australia? — F. Kirk, Normanhurst, N.S.W.

A.: B.A. screws, nuts and washers are not readily available even from Engineers' supply houses, and the hexagons on nuts below 8 B.A. are often oversize. Anything smaller than 10 B.A. is more difficult again to obtain. However some hobby stores do keep stocks, specially imported for modellers.

Q.: What threads are used on European models such as Marklin? — G. Kirk, Normanhurst, N.S.W.

A.: As a rule what are loosely called 'metric threads', but reference to 'Machinery's Screw Thread Book', for example, reveals, a large number of threads which could qualify. Probably Table G. 9 would be a good guide, Swiss Metric Threads, and you will find a thread of nominal diameter of 2mm very common in models.

Q.: Now that my layout is satisfactory, would it be wise to solder the fishplates for good electrical connection? — F. Ormiston, Coogee, N.S.W.

A.: Emphatically "NO", it would not be a good idea. Certainly bonding rail joints is a very sound procedure, but do it with fine wire and a small soldering iron; 10 amp fuse wire is quite satisfactory.

Q.: My Athearn passenger cars with three axle bogies do not hold the track satisfactorily. What do you suggest? — H. Davidson, Geelong, Vic.

A.: Aside from obvious checks like king pin freedom, test critically each truck on a truly level surface, such as a piece of glass. These trucks are not equalised at all, and often the assembly is indifferent to a point where see-sawing is present. Incident-

ally the centre wheel sets are often slightly under gauge, and this may be intentional on the part of the makers. The newer clip on draft box has excessive spring tension on the X2f coupler tail, and this may be slewing the trucks sideways.

Q.: Will Fleischmann operate on Shinohara track and points? — D. Cooper, Port Pirie, S.A.

A.: Fleischmann will not operate on Shinohara track or points without modification to N.M.R.A. Standards; the back to back on Fleischmann is 14mm which is too narrow, and the flanges themselves will strike the chairs of the sleeper base. If you are contemplating using Fleischmann North American style equipment, remember that this brand is overscale, and certain combinations such as a Fleischmann and Athearn diesel will scream at one another.

Q.: Is masonite suitable for mounting model train track? — A father with a problem, Bankstown, N.S.W.

A.: Masonite is really too hard to accept spikes etc., and is very prone to warpage even when braced extensively. Cane-ite may be used but is too soft to hold anything but long spikes and screws. Now that 1/2" Pyneboard is available, this is the ideal substance, although many still prefer 1/2" 5-ply.

SCENERY FOR MODEL RAILROADS

By **BOYCE F. MARTIN**

Louisville, Kentucky.

U.S.A.

It is rather surprising that many model railroaders do not consider scenery as a part of model railroading which contributes not only to the enjoyment of the hobby but also to actual operations. It is always difficult for me to enjoy operations unless there are some actual stations, shrubbery, cuts, fills, crossings, etc., to give the full effect of a train going from somewhere to somewhere else to accomplish a specific purpose. Now, I am well aware of the fact that a model railroad does not spring full blown into being, and that there is always some part of the railroad which has not yet been completed. But, I am speaking of the ultimate objective, for some model railroaders are content to say "I don't care much for scenery; I prefer to concentrate on operations."

Well, that's the advantage of this hobby; every fellow can do exactly as he pleases so long as it provides him pleasure and relaxation. I am merely giving my opinions as to what constitutes a complete model railroad.

A fellow in Australia gave me the best tip on how to secure scenery without too much work and time and which serves very well until more permanent scenery can be installed. Ken Lowry, in an article five or six years ago, suggested the use of rug felt painted green. This gives the brownish background of the earth, and the coarse fibres can be twisted to resemble small shrubs, weeds,

and coarse grasses. This waffle patterned rug felt, used beneath rugs, is split in two and the inside is lightly brushed with green enamel or other paint. I install this material on the bench work as soon as track is down.

The effect is pleasing and in addition, there is the practical aspect that this felt saves the derailed locomotive and prevents it from falling to the floor. I can testify to this fact in HO gauge, although larger scale and heavier locomotives might need additional supports.

There are many different methods of constructing scenery, and they vary with local conditions. For example, I could never use sodium silicate or water glass on my layout because the humidity of our climate affects this adversely. The same thing is true of some of the water based glues and casein materials. I have found that the best mixture for my purposes is hydraulic cement, such as Portland cement or natural cement, mixed with short asbestos fibres. The hydraulic cement gives strength to the structure, and if the mixture is applied over ordinary house screening, you have in effect a miniature reinforced concrete.

If mortar colors or dry paint colors are added to the mixture some very natural effects can be secured. The mixture is shaped with a wet brush, or in the case of protruding ledges and stones, it is shaped with a spatula or

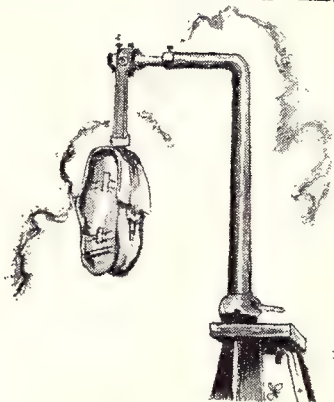
knife. A brush dipped in water smoothes the finished product so that no finger marks or brush marks are visible.

Trees, shrubs, and grass must be added to give a natural effect. If you have never seen a model train screened by the branches of trees as it flashed by regularly spaced telephone poles, you have missed a real thrill in model railroading. This type of scenery also makes you operate your equipment more nearly at scale speeds. You slow down your train considerably as you add scenery. Most model locomotives in the U.S. are geared too high and the tendency is to operate at what are actually excessive speeds for the prototype.

Scenery gives you a sort of automatic speedometer, for you realise that the train must not speed by these natural surroundings. This is difficult to do when there is nothing but bare wooden supports around the track.

Now, don't get me wrong. I found that model railroading takes time. But scenery takes a lot less time than most people think. All I am saying is that you should include your plans for scenery, along with your plans for trackwork and rolling stock. You should finish and landscape a part of your layout just to show yourself and others what the finished product will some day look like. If you do this, you are certain to include scenery in your model railroad planning.

MAIL BAG



Sir,
With regard to "Our Plan" in the October/November issue of A.M.R.M., of the Tasmanian "W" class DH. Some detail has been missed on the plan and anybody not having had the chance to view these locomotives, yet wishing to model them could miss out on correct detail. Enclosed is a photo of W2 taken from exactly the opposite angle of that photo published with the plans. It shows the mesh panel detail and the radiator panel detail in the front of the rear hood which was omitted from the plan. This should be shown at ELEVATION ON A. The front of the hood detail shown at ELEVATION ON A is that of the leading hood which should have been shown at ELEVATION ON B. Also, since that TGR official photo of W1 was taken, the TGR modified the rear hood slightly adding air intakes on each side of the top. (See my photo).



Sun shades have been placed over the top of the side windows and there has not been any sun shades over cab doors or the small windows next to the doors. W1 details same as W2's. Apart from this, thanks very much for publishing the plan; I'm glad Tasmania is not being missed even if it is a "growler" plan. I would like to hear from other modellers in HOn 3.5 (3' 6" HO scale) also those who operate both HOn 3.5 and HO.

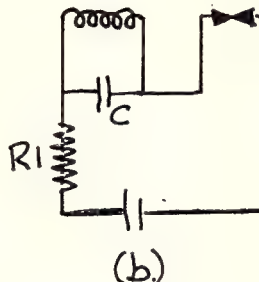
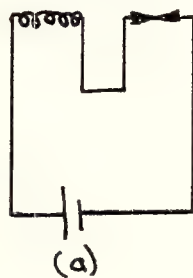
PHILIP G. GRAHAM

178 Wilson St.,
Burnie, Tasmania.

Sir,

Unless I have misunderstood the operation of the "Blinking Light" Circuit in the Dec./Jan. edition, I think that you can achieve the same blinking effect using just one relay. Consider the following:

RELAY



N.B. Relay
Contacts Break
When Coil is
Energised

A relay connected as shown in diagram will operate like an electric buzzer. Inclusion of resistance R1 will hold the relay on for a short period. Inclusion of resistance R1 will delay the energising of the relay coil, i.e., will hold the relay off for a short period. Hence, by a suitable choice of C and R1, one can use a second pair of contacts to switch lights on and off at any given rate. I do not know off hand what values of R1 and C would be required, but I would think that those quoted for R1 and C1 in your article would not be far wrong.

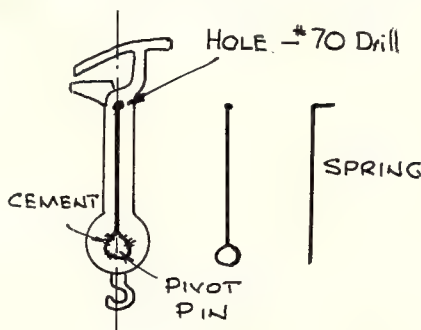
G. D. TOWNER,

Drummoyne, Sydney N.S.W.

ED. NOTE: Thank you for your alternative circuit for blinking lights. However by using two relays the following advantages are achieved: (1) There is a longer period of "on" and "off" without using a very high value of capacitor. (2) There is an equal period of "on" and "off" over a wide range of time "on" and "off". Yunnerrstan?

Sir,

Many of the fellow modellers might, like myself, enjoy the Airfix models, especially the coupling which is very inexpensive and works like a charm. The only drawback being the unsightly (to say the least) rubber bands for centering the couplings. These also caused the wagons to stand at a slight angle to the track. Some wagons had to be cut and altered to fit the rubber bands. After a lot of trying with softer rubber and metal springs, I found a relatively easy way out and have installed since in all my rolling stock the Airfix coupling.



This is the method. Drill a small hole with a No. 70 or so drill in the front of the coupling, bend a spring from 0.1mm (4/1000") wire to the shape as in sketch. Put the right angle bend through the hole and cement the loop to the pivot pin with suitable cement. Adjust

spring before cement sets so that the coupling does not pull the wagon askew. I hope that this suggestion might help to introduce this coupling to more modellers.

KONRAD PEPER

Cooma, N.S.W.

Sir,

May I draw your attention to the article on page 13 Dec./Jan. copy of A.M.R.M. "The Siddall Super Super Semaphore Signal System". The article is very well presented, I have but one complaint; which is, what is the resistance of the resistance wire. Most resistance wire is plain copper or steel uncovered. In the said article it says to bare the wire; I cannot see how. Could you give me the voltage of the wire.

Congratulations on a very fine magazine indeed.
Giru, N. Q.

D. CHURCH

ED. NOTE: This is only one of many queries we have received about this article. The wire used in the article has a resistance of 3 ohms per foot and is uncovered. In reference to baring the wire the author meant that the usual oxidised coating should be removed by scraping before the ends are attached to make good electrical contact. To make it easier for modellers not in touch with an electrical supply house we conducted some experiments using various types of resistance wire to see how much movement could be produced at the centre of the wire to move the signal operating spring. These are the results using 14 inches of wire in each case.

Type of wire	Amount of movement
3 ohms/foot resistance wire	1"
Radiator element wire	3/4"
Jug Element wire	3/4"
Toaster element wire	1/2"

Sir,

It is pleasing to read that at last we can buy model rolling stock of Australian prototype and it is hoped to see the range available expanded.

I would like to suggest, however, that manufacturers consider starting their range by offering the Railways of Australia "X" bogie exchange vehicles. These wagons will by 1968, be seen all over the country from Mt. Isa to Perth, and will, therefore, not be out of place on any layout of Australian prototype.

As the present equipment is offered without bogies, there is perhaps an opening for someone to offer bogies fitted with either NMRA or new Tri-ang type wheels so that all model rails in Australia can have the chance to operate Australian type equipment.

B. BLACK

Allawah, N.S.W.

MAILBAG Cont.

Sir,

At the beginning of the N.M.R.A. standard sheets, we read, "The purpose of N.M.R.A. Standards is to permit interchangeability of equipment from various sources between different model railroads. Some compromise between precise scale reduction and practicality appears throughout N.M.R.A. Standards in the interest of better interchangeability and performance." In this statement, we have the chief purpose of the N.M.R.A.; a purpose which has been all but lost.

In Australia, we are all aware that the N.M.R.A. ideal of full interchangeability is far from a reality, and I believe, that this fact alone stops many fine modellers from joining N.M.R.A. in this country.

Many of the migrants to this country and to New Zealand quite naturally want to model the railways of their homeland and because the commercial equipment they use is not built to N.M.R.A. standards they can see no point in joining the Association. Fellowship can surely be had without paying N.M.R.A. dues. Many others operate Triang equipment because of its easy availability and its low price. These are people who could use many of N.M.R.A.'s services but too often are told that they only use 'toy' standards.

In Australasia most prototype railways are built with 42 inch gauge but there are no standards at all in N.M.R.A. for modellers of this gauge, although there are standards for the nearly non-existent 36 inch gauge.

For too long the N.M.R.A. standards committee has concerned itself only with their problems in North America. I believe it is time to start co-operating with the standards committees set up

by railway modellers in other countries and call on the British and European manufacturers to adopt a common international standard wheel profile.

Meanwhile, the use of the scale wheel conversion kits already available can be encouraged by trade advertising and magazine articles.

The S.C.R. is the largest N.M.R.A. region outside North America, and the one with the biggest problems with wheel standards. It must then be in our own interests to revive an active movement towards international standards and demonstrate that "Model Railroading is fun" not for a few but for all.

P. R. WOOLLEY

Strathfield, N.S.W.

Sir,

I was pleasantly surprised to see the write up of the Refrigerator Car Kit in the October/November issue.

Referring to the comment about "what type of bogies are used in S.A.", this information is given on the instruction sheet as follows: Class RB, Arch Bar or ASF; Class RBP, Passenger style, 6'9" wheel base; Class RRP, Ride control bogies.

With reference to the lack of brake pipeline and reporting details, I will endeavour to work on this at my earliest. There is one thing I would appreciate your correcting if possible in the next issue, and that is the price. With the remaking of the kit, bosing, etc., there was necessary a price rise and the price set on in Adelaide and Melbourne is as follows:

2 door version as reviewed in your magazine 29/6 retail. 4 door version with outside bracing 32/6. These prices at Titcher's Hobbies in Dandenong and Da Costa Books, Da Costa Building, Grenfell St., Adelaide.

BILL COLES

North Western Models

17 Glenrowan Rd.,
Woodville, South Aust.

Sir,

I enclose a print of a plan I have drawn of the NSWGR C30 class locomotive. I am sending it to see if it is of any use to you for publication. I myself have my doubts but other members of the Wollongong Model Railroad Club have requested me to submit it to you. If you think it is good enough and suitable for printing in the AMRM I have the negative from which this print was taken which I would be only too happy to send if required. I will also mention that I have also completed a plan of the D57 and intend in the very near future to do the C38 and AD60 if you are interested.

I have done these plans to enable me to scratch build my own locomotives as I have now decided to go 100% NSWGR. At present I have a C38 and C32 completed and a D53 half completed.

As you will notice the plans are drawn to a scale of 3.75mm to the foot. I have settled on this scale after much investigation into available driving wheel diameter and motor sizes and have found that this compromise scale covers the largest range. Also because of the comparative smallness of the Australian loco they do not look out of place when placed on a layout with US locos.

I also have ideas for some articles which, when I get the time, I hope to write for your consideration. The only problem is that I would be unable to have them typed as you request. I await your critical remarks regarding the above.

In closing I would like to wish you and all the staff the best for the new year and trust that the magazine will grow and grow.

HOWARD G. ARMSTRONG

Box 77, P.O.,
Narooma, N.S.W.

HINTS

After scribing bristol board lightly with a razor blade to represent planking, paint the scribed material with orange shellac and wipe off with a soft cloth, allowing the shellac to remain in the scribed lines. The bristol board is now ready to paint whatever color you wish, in the usual manner. The scribing will show up quite distinctly beneath the paint.

* * *

Ask any photographer for his wasted double weight enlarging paper. Cut out your window frames and sashes from this paper, using a piece of glass as a cutting board. You get clean cuts this way.

* * *

Indian ink thinned with water is a good weathering agent. Use about two brush fulls to a cup of water.

* * *

A good gray color for the tunnel portals and stone work can be made by mixing white and black liquid shoe polish. The shade can be varied to get the darker smoked effect at the top of the arch. Outline the stone work with a hard lead pencil.

Iodine is excellent for giving flat car and box car floors a natural oiled wood appearance. Successive coats should be applied until the desired shade is obtained. Telephone poles can be given the treatment, too.

* * *

When a small flexible drive is required between motor and mechanisms of HO locos, the use of the soft plastic tube from an exhausted Ball Point refill does nicely. A 3/32" shaft will need a couple of layers of cello tape on its first, thus giving a tight push fit into the tube.

* * *

Shreds or filings from plastic ice cream sticks dissolved in carbon tetrachloride make quite a good plastic cement, the difference of colours in the sticks giving a wide range of coloured cements. CAUTION — DO NOT SNIFF THE CEMENT.

* * *

This is probably not a new idea, but I can vouch for the fact that it's a good one. If you like shunting operations, then fix a short piece of wire (no longer than 1") on to one corner of all your cars, get hold of some spaghetti tubing in various colours, and use one colour for each station or siding

on your layout. Insulation stripped off radio hook-up wire is just as good for the tubing.

The idea is that a train comes into the terminal, all the tubing or "waybills" are taken off and replaced with different ones taken at random from the tin you're keeping them in, and then the train is marshalled to go out again. Each colour stands for a different station, and when the train arrives, the cars bearing that colour are shunted off, and any out-bound cars pick up, and so on round the system.

Of course, it slows things down somewhat, but it gives point to your shunting operations, and it's a lot of fun. If you have two or three operators it's a whole lot more fun — somehow the trains they send round for you to shunt never seem to be marshalled for easy shunting.

* * *

Have you a friend who wears a hearing aid? If so, ask him to keep the old flexible twin flex which plugs into the earpiece, when he has it renewed. This makes an excellent connecting wire from the tender to the motor in your locomotive. What's more, an excellent two-pin plug will be found at each end of the flex, which may be adapted for many uses.



CLUB CAR

To Club Officers: These pages are available for the dissemination of news about your societies. Brief news about activities will be welcome for these pages. Closing date is fifteenth of month prior to month of issue.

N.M.R.A. ACTIVITIES

Eastern Division

Firstly, congratulations to John Bujack on his appointment as Eastern Division representative to the Regional Public Relations Committee.

It is hoped that this year the division will be able to continue with a meeting programme similar to last year, with trips, operation and more clinics.

Members are reminded that no meeting will be held in April because of the Regional Convention in Melbourne.

However, all other meetings will be:— March 6, Jack Spedding, 24 The Glen Rd., Arncliffe; May 15, Kel Mulhall, 71 Railway Parade, Lakemba.

Southern Division

Well fellers, convention time is getting closer so we are now waiting on your registration and what board you require. Get in early as rooms will be scarce during that time. I think we can promise you a good time.

Our first meeting for '65 is, or was, a trip with the A.A.H.S. (Vic.) on the "Warburton Moonlighter". The train left Flinders St. around 4.10 p.m. behind two swing door motor cars and at Lilydale was changed for steam.

The March meeting will be held at Sorrento (Wally Kennewell's) on Sunday, 14th, which is a day's outing for the family and visit the layout in the afternoon.

Sunshine State Division (Queensland)

The December meeting and the Christmas party were held on Dec. 12 at Paul Leuven's home. The main item was the filling of the position of Treasurer, which position had been vacated by Arthur Rowe who has moved to Canberra. The position has been combined with that of Secretary for the time being. A discussion on Model Railroad Week should result in some definite proposals being produced at the February meeting. There are only nine months before this Exhibition occurs.

Next meetings: Feb. 13, Dan Sheehan, 68 Mearns St., Fairfield; March 13, Greg Gilby, 33 Paragon Street, Yerongpilly.

Central Division Report

The January Meeting was held at Vic Hill's home and members were shown the Convention Program. After the conclusion of the general business and correspondence the Members adjourned to the Train Room and saw the results of Vic's work on a small round the wall type layout, which features a two level main station and yard system. Vic has some fine locomotives on his roster which includes a Hudson and Niagara (N.Y.C.) as well as some fine brass models of S.A.R. Locomotives. After a very nice supper some Railway Photos of an A.R.H.S. trip to Alberrie Creek were shown by Mr. R. Footner.

The February Meeting was held at Malcolm Bastian's Home. Correspondence from the Executive Committee was read and discussed. Malcolm's layout was operated faultlessly for about 2 hours. After enjoying a very nice supper, the Members were shown Slides and Movie Films of the recent wreck of the South East Express at Keith.

P. Lethely and R. Footner were complimented on their fine set of films of this accident. John Liebelt showed his film of the A.R.H.S. trip to Quorn, Hawker, and Pichi Richi Pass.

Advance Notice of Meetings:

March 10th, W. Gully, 8 Lloyd Street, St. Mary's.
April 14th, P. Lethely, 150 First Ave., Royston Park.
May 12th, R. Gillies, 96 Cremorne St., Unley.

OTHER CLUBS

NEW SOUTH WALES RAIL TRANSPORT MUSEUM. Secretary: Graham B. Ahern, Box 1983, G.P.O., Sydney.

The Museum was formed in 1962 and now has a membership of approximately 250 persons. The main aim is the preservation of locomotives, coaching and goods rolling stock and other items of railway equipment of historic interest from the government and private railways of New South Wales. Approval in principle has been received from the Commissioner for Railways for the establishment of a railway museum at Enfield Locomotive Depot when the site becomes available.

Meetings of the Museum are held on the 3rd Wednesday of each month in the Ulster Room, Irish National Association building, Devonshire Street, Sydney, near Central Railway entrance, commencing at 7.30 p.m. Visitors are always welcome.

The Museum runs railfan tours of both weekend and day duration at frequent intervals to various places of interest.

A small magazine entitled "The Roundhouse" is produced quarterly, by the off-set printing process, to keep members informed of items of interest.

Membership fees are 10/- entrance fee, and £2/0/0 per annum for full membership, and 10/- per annum for student members.

Any further information which may be required can be obtained from the Secretary at the above address.

BACK NUMBERS

of this magazine are available at 2/6 each. Available are Nos. 2, 3, 5 thru 10. Add 5d postage for first copy, then 3d per copy thereafter. Make Postal notes payable to SCR Publications, Earlwood.

AUSTRALIAN MODEL RAILWAY ASSOCIATION, N.S.W. BRANCH. Secretary: R. Ackland, 9 Wyuna Road, West Pymble, N.S.W. Meetings of the N.S.W. Branch of the Australian Model Railway Association have been settled on the last Saturday of the month at 2 p.m. at Burwood Police Boys Club, Deane Street, Burwood.

As regards news for publication, this year with A.M.R.A. looks like being one of "plenty of work" as we have recently acquired premises for our club rooms but as the building is of a portable nature, many working bees are planned and are functioning in pulling the building apart, finding suitable land and eventually putting everything together again. Bruce Lovett (49-4659) has been appointed Official Whip to round up the Working Bees.

THE AUSTRALIAN RAILWAY HISTORICAL SOCIETY. Box 74 P.O. Broadway, Sydney.

This Society was founded in Sydney in 1933 and subsequently divisions have been formed in all states except Tasmania. Total membership in Australia is over 1500 and is steadily growing. The Society is affiliated with several overseas railway organisations.

The main objectives of the Society are to provide means whereby people interested in the operation and history of railways in Australia may associate with others with similar interests to their mutual benefit and enjoyment, to encourage the compilation of authentic records, to produce publications, to arrange outings and to preserve relics.

Each division holds monthly meetings which usually feature a prepared talk, films or slides on some subject of railway interest while time is set aside for members to meet together for exchange of information, photographs, etc.

The Society publishes monthly an illustrated, high quality magazine, the "Bulletin" containing articles of historical and current interest from all states. In addition most divisions produce a monthly news magazine covering details of current events in their state. Books and recordings are also published from time to time.

Membership is open to anyone interested in railways provided that they are 15 years of age or more. The current subscription rate is £2/2/0 per annum and includes the "Bulletin".

Please address all enquiries to the Secretary at the above address.

CENTRAL COAST MODEL RAILWAY CLUB. Secretary: I. H. Dodds, 4 Adelaide St., East Gosford, N.S.W.

Some 40 members together with their families celebrated at the third Christmas party on Thursday, December 17.

The party was held in the upstairs portion of the Boys and Girls Club Rooms, Gosford.

Members were entertained with a selection of colour slides belonging to Frank Moore and Harry Doherty plus recorded sounds of trains at work.

Tony Carr of Wyoming rendered two songs and treasurer Frank Moore kept the crowd in cheerful spirits with some humorous stories and commentary on slides.

Secretary Len Dodds spoke of the club's progress through the year and mentioned that seven exhibitions had been staged by the club during the year.

Mentioned in the secretary's vote of thanks for their support during the year were: Vice-president, Harry Doherty, Lionel Wallace, Geoff Wallace, Harry Gibson, David Batley, Norm Carr and his sons, Trevor and Tony, Frank Moore and John Moore, Ron Dawe and other committee members.

OTHER CLUBS

CENTRAL COAST MODEL RAILWAY CLUB.

Secretary: L. H. Dodds, 4 Adelaide St., East Gosford, N.S.W.

A large crowd of members attended the recent meeting to start the year's programme.

Visitors for the evening were Eric and Geoff Lawley and Warren Harris who was holidaying with his parents at Point Clare.

The club has been invited by the Woy Woy District Nursing Association to stage an exhibit at the association's coming fete in March to be held in the ground of Dr. Fox's Ettalong home.

Also on March 13 the club is staging an exhibit at Ourimbah for the Ourimbah Girl Guides Association.

Members are reminded that the models for the patron's trophy are to be scratch built and must be completed by April to allow judging to be completed before the last meeting in April.

As we go to press it is learnt that Lionel Wallace has been admitted to hospital with a coronary occlusion. All members of the club wish him a speedy and complete recovery.

GEELONG RAILWAY MODELLERS. Honorary

Secretary: J. Macdonald, 15 Arkana Ave., Highton, Geelong, Victoria.

At our January meeting we held a competition night. It was open to all, whether members of the club or not. The range of entries was very varied and interesting. There were two sections, they were, Locomotives and rolling stock and Lineside structures, etc.

There were two prizes for each section, however, the judges had so much difficulty in making a decision for the first section that they gave the two entries which were causing the trouble, equal first place and scrubbed the second placing.

The two winners of this section were Lindsay and Gavan Bennett, brothers, for their entries of a Vic Railways 'Z' van each.

The second section was won by John Pattinson, a junior member with a very well constructed through truss bridge. It was very realistic even to the smell — he painted it with creosote for true detail!!

Second placing in this section went to a visitor from Colac, 45 miles away, with an unusual entry. It was a transistor controller entered by John Millane. John is a fairly new member of the model railway brotherhood but from what we have seen of his work he will bear watching in the future.

AUCKLAND METROPOLITAN MODEL RAIL

WAY CLUB. Hon.-Sec.: Warren Cunningham, P.O. Box 5883, Auckland C1., N.Z.

The club has been steadily building up its library and now has over 100 books available for the use of members. These

books are also available for the use of country members who only have to pay the postage. All are on either model railways or the prototype and cover a wide range. At one meeting each month we now hold a competition which is for a different model each month. First, second and third prizes worth 3, 2 and 1 points are awarded by judges picked by roster and these points are tallied so that at the end of the year the person with the most points is awarded a trophy. Meetings are held on the 1st and 3rd Tuesdays at the Museum of Transport and Technology, Western Springs and new members are welcome. (Phone 82-241).

TAURANGA MODEL ENGINEERING CLUB.

Hon. Sec.: H. Shilton, 130 Sutherland Rd., Judea, Tauranga, N.Z.

This club has been doing a little re-planning, and after last summer it was

decided to tear down the layout and re-build. The clubrooms face due north and have windows the full length. In consequence, the sun played havoc with the track, so the benchwork was taken down. windows painted over and air vents put in the ceiling.

The new layout is still following N.Z.G.R. practice, but is based on actual places, and the stretch of line from Tauranga to Waihi taken as a basis including Athenree Gorge and tunnel. (Some tricky bridges to model).

The rail trip side of things is not being neglected and recently, the Hamilton and Rotorua Model Railroaders were entertained with a visit to all the club's layouts and a guards van trip to Waihi in the afternoon. This last Saturday the day was spent photographing events on the Spiral at Raurimu, which is just north of National Park.



NOTES OF THE SYDNEY MODEL RAILWAY SOCIETY

CLUB "O" GAUGE NEWS

On a visit to Melbourne in January this year the President, Paul Simpson, attended a meeting of our sister society, the Victorian Model Railway Society.

The President of the V.M.R.S., Mr. A. J. Goode, welcomed Paul and through him wished to extend greetings to all members of the S.M.R.S. and extended to us a cordial invitation to visit the V.M.R.S. clubrooms at Auburn Station, Victoria. The President responded, thanking the V.M.R.S. for their warm welcome and gave a short summary of events that occurred with the S.M.R.S. over the past few years. He also invited the members of the V.M.R.S. to visit the layouts of the society whenever they may be in Sydney.

Paul also reports that he visited several V.M.R.S. members' layouts as follows:

Alan Goode, O gauge, stud contact, V.R. prototype, double and single line with automatic and controlled signals and notably a speed indicator, which indicates speeds of trains, using illuminated numbers on a panel, thus indicating to the driver speeds in scale m.p.h.

Ford Niquet, O gauge, stud contact, V.R. prototype, double main with sidings, fitted around the walls of an attic, in which was also situated the workshop.

An interesting period was also spent in the workshops of O-gauger, Chalmers Watt, who displayed various components he has manufactured for locomotives and signalling. The most compact article was a searchlight signal in which a quadrant with coloured lenses was fitted inside the background of the signal head with a lamp behind it. The quadrant was operated by a length of cotton down the side of the post, this cotton being attached to the two operating relays to give the desired red, green and yellow indications.

Not much news for this issue as the club has been in recess from 14 December until February 8. May 1965 see a

happy year for all in the model road of railroading.

On the first night back Bob Stone had in for trial run a 77 scale model of a Dental Clinic car, painted a light cream with silver roof and black undergear. This car should add interest to our passenger trains; it has been checked for coupler height and is to be permitted to run on the layout.

O-gaugers should remember that couplings on rolling stock and locos using the present type made by Norm Read must be centered and 5/8" from railhead to bottom of coupler loop. No transition couplers will be allowed except that if a member wants a set of freight or passenger cars of his own on the track then he must, and I say must, have on the terminal ends the coupling in use by the club.

So far there have been no takers for the hole at the back of Medway. Anybody for the development of this area?

One member who is deep in O gauge and who has quite a few locos and rolling stock on the layout will be missing for some time to come as his job has taken him to Tamworth. To some of the older members of the club, and one time member of the O Gauge House, Ashfield, Jack Fitzpatrick will be missed . . . Good luck to you and your family Jack, and may we see you when in Sydney. Our New Zealander whose name read Dickers should have read Vickers. Sorry Ray. Another gentle hint to all members is that all subscriptions are becoming due in April-May 1965. All attending the club are asked to pay Ken Smith, or post it to him. To new members who have joined in the past year you are also due to pay subscriptions but at a reduced rate. Further details from Ken.

HO ACTIVITIES

Well fellow members we start a new year of model railroading on the HO layout and we are looking forward to the continued support of HO members in '65. The main thing to decide early in the New Year is whether to have complete operating on the layout or to go ahead with the problem of the bottleneck at Wits End and make the layout more flexible in operation. Old and new members are cordially invited to offer suggestions or ideas for better operation of our HO layout.

DRAWINGS OF LOCOMOTIVES AND ROLLING STOCK N.S.W. RAILWAYS

	7m/m	4m/m	3.5m/m
	"O"	"OO"	"HO"
	Gauge	Gauge	Gauge
D50 "T" Class	10/-	8/-	7/-
MHG Brake Van	8/-	6/-	5/-
BWH Bulk Wheat Hopper	8/-	6/-	5/-
MRC Refrig. Van	8/-	6/-	5/-

Postage Extra.

Obtainable from: J. MacMICKING,
14 Stan Street,
Willoughby, N.S.W.

PASS EXCHANGE

Do you wish to exchange your passes with other modellers? If so, send your name and address with one of your passes to:

Wally G. Kennewell, Melbourne Rd.,
Sorrento, Victoria.

The readers listed below are willing to exchange passes.

BOULDER CITY & OMAHA RAILWAY COY.

Condon, D.O.,
36 Clare St.,
Athol Park, S.A.

SOUTH AIRLIE RAILWAY,

Grieger, R.C.,
20 Airlie Ave.,
Prospect, S.A.

EAST YORK PACIFIC RAILWAY,

Everist, C.R.,
828 Kingston Rd.,
Apt. 412,
Toronto, Ontario, Canada.

HERON LINE,

Thornley, Ellis W.,
79 Aubreen St.,
Collaroy Plateau, N.S.W.

ARUNTA LINE,

McLeod, A.,
66 Minter St.,
Canterbury, N.S.W.

An unusual vehicle is the V.R. Brake Van, Code "Z", a plan of which appears opposite. Those modellers who scratch build should find this an ideal car to model.

(Official Victorian Railways Photo).



THE MARKET PLACE

12 words for 2/6. Extra words 2d. ea.
Name and address free. Cash with copy.
No charge to N.M.R.A. members. Closing
date: 15th of preceding month (e.g. 15th
July for August issue).

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MODEL Steam Locomotives, all gauges 0 to 15 ins. Detail Blue Prints and Castings supplied. Outline Blue Prints 7 m/m scale practically all NSW Locomotives, past and present. Also Rolling Stock. Tra cars. Authentic Plans of famous ships, also marine engines. Catalogue 7/- O. B. Bolton, 70-72 King St., Sydney.

FLEISCHMANN Equipment. Four each of 1502B, 1503B, 1506, two 1510B, One 1508B at 23/- each. Four 1416 at 33/- each. Eight 1407 at 28/- each. Two 1504B at 24/- each. Four 1445B at 27/- each. Four each of 1479B, 1479SB and two 1479RB at 17/- each. Three 1470B and one 1467B at 18/- each. Some kits partly assembled. Assembled items used once. Phone 622-2385 or G. E. Burr, 19 Carinya St., Blacktown, N.S.W.

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USED Tenshodo S.D.9 diesel road switcher also G.P.9 diesel Loco particulars, price to F. Kelly, Howden St., Carrington, Newcastle, N.S.W.

62 PAIR of Tenshodo couplers, some still in packets, rest as new. 30/- the lot. F. G. Gill, 20 Turvey Road, Blacktown. Phone 622-3073.

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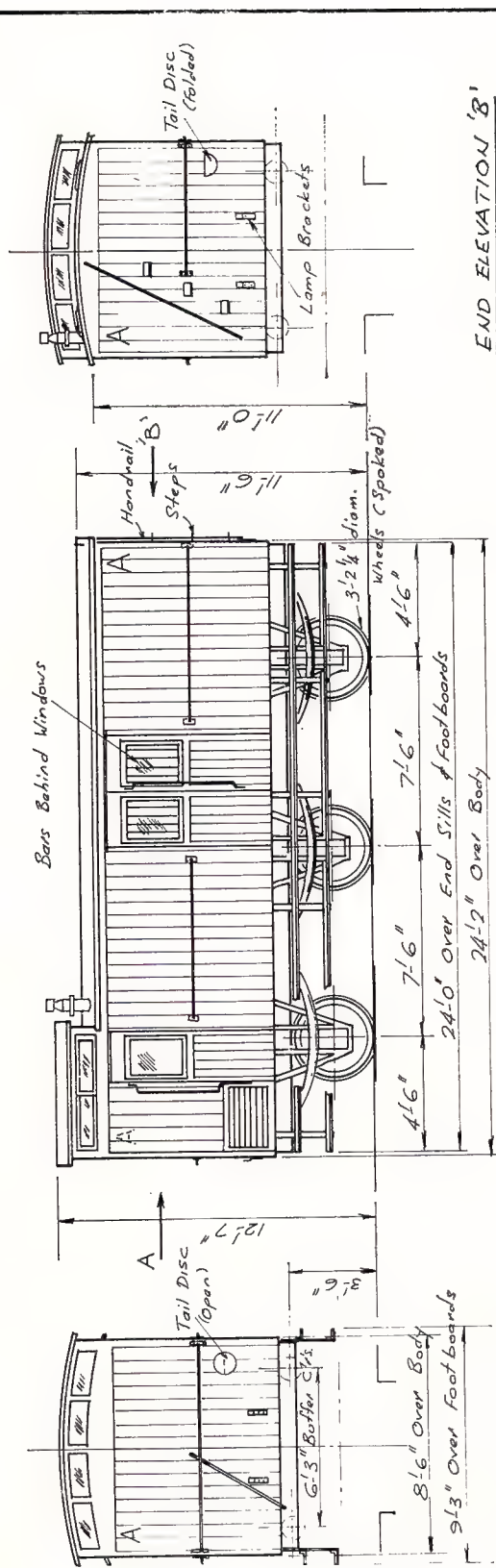
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END ELEVATION 'B'

SIDE ELEVATION

END ELEVATION 'A'

COLOUR:-

ROOF:- Buff.

BODY:- Fawn Red - Lettering - White

U'FRAME:- Black

NOTE:-

Letter 'A' on Diagonally Opposite Corners Indicates Position of Coupler Release Handle
Four Wheeled Version of This Vehicle Also Built, Numbers 62710-740
Code 'ZP' Vehicles Suitable for Passenger Trains

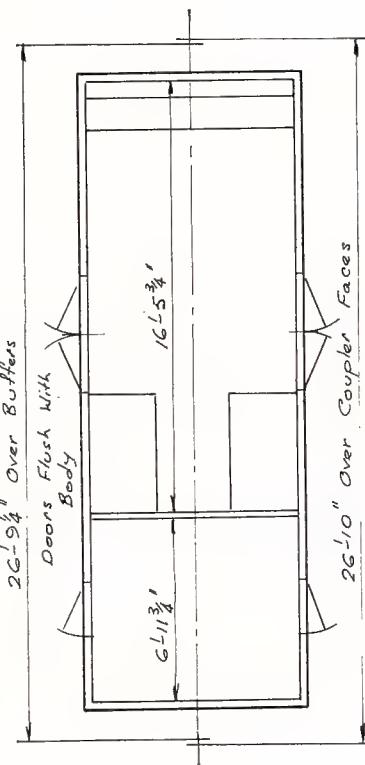
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5'3" GAUGE

BRAKE VAN

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PLAN



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our plan

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We are pleased to announce that we have been elected sole Australian agents for these famous hand-crafted Japanese brass locomotives which are so popular in America. The first shipment, now on the water, and expected shortly, will include the following:

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EH-112	C&O Class J2 Mountain	4-8-2
EH-113	N.P. Class F1 Consolidated	2-8-0

ATHEARN MODELS

New shipment just arrived — includes new gear drive GP-30 and GP-9 Diesels. These kits are keenly priced at

£7/12/6 each

Also available are the new Athearn 12 volt motors at

£3/15/0 each

(As advertised in Dec. '64 issue of Model Railroader).

TRU-SCALE

660 Lineside Shanty Kit	17/6
661 Water Tank & Windmill Kit	14/6
663 Bank Kit	22/6
664 Saloon Kit	22/6
3221 Work train bunk car, Ready to run	19/9
3222 Work train Kitchen Car, R. to R.	19/9
3223 Work train Engineering tool car, R. to R.	19/9
3224 Work train Ballast car with load, R. to R.	19/9
3225 Work train Crane Tender, R. to R.	19/9
3226 Work train Caboose, R. to R.	25/9
3227 Work train Flat car with load, R. to R.	19/9
T-12 Lichen Moss-Green, Economy pack	9/9
T-13 Lichen Moss-Mixed, Economy pack	9/9
T-15 Gray Ballast, T-17 Red scenic stone, T-20 Gravel	4/- per bag

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Double Crossover N/S	84/- "
Double Slip switch, No. 4 or No. 6 N/S	84/- "
N/S Rail Joiners, per pkt, of 12	2/- "
Insulated Rail Joiners, per pkt, of 12	2/- "
Globes, Grain of wheat, red green amber, clear	2/- each
Switch Machines for turnouts, flat type	14/6 "
Snap Track 9" sections, brass	3/- length
Snap Track curves, brass	3/- "
Snap Track Turnouts, brass, No. 4	19/9 each

THE MAGAZINE DESIGNED FOR ALL RAILROAD HOBBYISTS



THE AUSTRALASIAN

MODEL RAILROAD

MAGAZINE

Registered at the G.P.O. Sydney for
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Incorporating "THE BOOSTER"

Price: 2/6

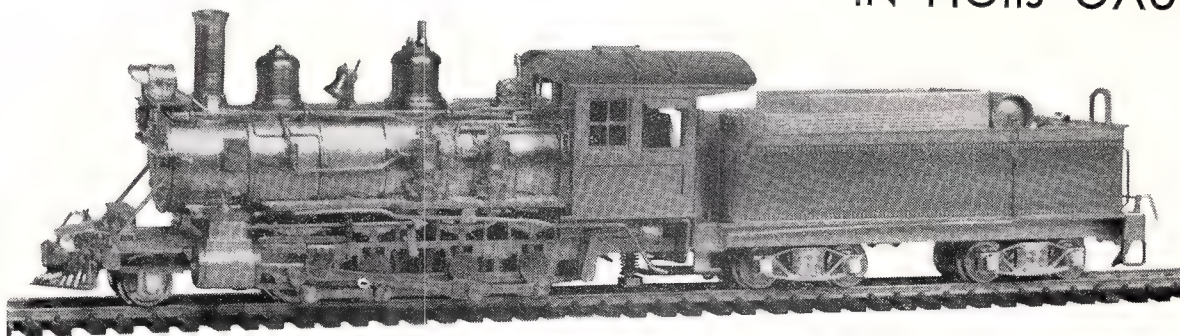
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APRIL/MAY, 1965

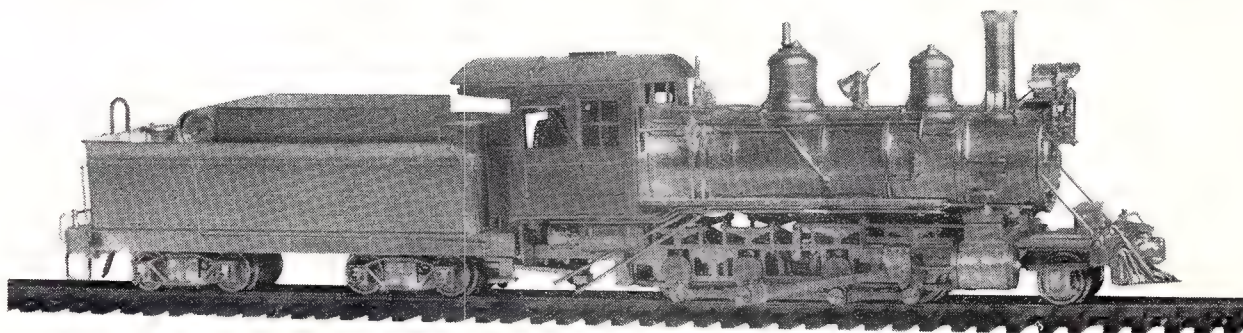
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of N.M.R.A.



SETTING A NEW STANDARD OF MOTIVE POWER IN HO_{N3} GAUGE!



D. & R. G.W. 'C-21' 2-8-0 LOCO. & TENDER: Skillfully modelled by Kumata and establishing a new record for fidelity and attention to detail, this Consolidation is offered the discriminating 3' gauger. Outside bar frames are finished in sharp relief, complete with semi-elliptical spring and rocker bars. Coupling rods are correctly knuckled and for the first time in HO_{N3}, all driver journals are fully sprung in working hornways. Dressed with innumerable brass investment castings and finished throughout in the highest order. Ready to run, unpainted. Length, 73". Weight, 11oz. Delivery approx. April. Price, £31-15-0.



Other News from THE DOCKYARD . . .

Although Tenshodo normally confine their "Crown" products to the U.S. market, limited stocks were obtained of the G.N. "S-2" 4-8-4. Now the G.N. "O-1" 2-10-2 follows — a masterpiece in hand crafted workmanship, yet reasonably priced at £56/10/-. Limited stocks should be to hand about the time this appears in print, together with stocks of Tenshodo's Rock Island Class "S-57" 0-8-0 Switcher. Painted and finished with a wealth of Cal-Scale 'lost wax' castings, this new Locomotive will be available at £32...

For the 'O' gauge traction enthusiast, a very few Manchester Street Railway (U.S.A.), 15 bench Open Car Bodies are now offered. Beautifully hand made of brass, these Bodies (for double truck) are completely detailed down to decked roofs, bulkheads, throw-over seats, controllers, grab irons, folding steps etc. Several 14 bench Bodies also available. Although priced at \$65.00 each in the 'States' — available at 'Dockyard' at £25 each... Joining our range of HO_{N3} 4'6" wheelbase trucks, Kumata have delivered stock of the vintage Archbar Truck, having a wheelbase of only 3'7". Price is 14/- per pair... Soon to arrive from 'United' will be more V. & T. 4-4-0 "RENO" and our first stock of the new P.R.R. 'L-1' 2-8-2 Mikado... HO_{N3} 'track gangs' please note: ample stocks of our new Flexible Track and No. 4 Points are now available from 'Dockyard' and all other regular stockists

of HO_{N3} supplies... Possibly of interest to 'scratch' loco. builders, our Aircraft Section offer Oilite and Ball Bearings which are a running fit on Romford Driver Axles. Prices are 3/6 and 15/6 per pair, respectively...

In stock now are the full range of new, silver plated, OO/HO Signal Bridges. See your December/January copy for illustrations, prices and details of this excellent range which come fitted with the necessary colour light signals, adaptable for left or right hand running... Rivarossi Rio Grande Krauss-Maffei Diesel Hydraulic Locomotives are now in stock at £14/19/6 per twin 'A' units...

'All Nation' O gauge rolling stock kits are now available, comprising as follows: No. 3665, S.F. 40' Shock Control Box Car, £6/5/-; S.F. SL-SF 40' Box Car, £5/15/-; No. 3560, P.F.E. 40' Wood Reefer, £5/15/-; No. 3967, Burlington 40' Composite Reefer, £5/15/-; No. 3701, G.N. 40' Wood Side Sheathed Box Car, £5/15/-; No. 3611, Depressed Center Flat Car, £4/7/-; No. 5000, 65' Steel Vestibuled Combine, £11/19/6; No. 5005, 62' Steel Vestibuled Coach, £11/19/6. The latter two passenger car kits include bronze, four wheel, pedestal type truck sets...

From Japan come more of the popular HO 0-8-0 Baldwin Tank Locomotive, illustrated details of which appeared in our October/November ad. Made for North West Short Line and of brass manufacture, out-

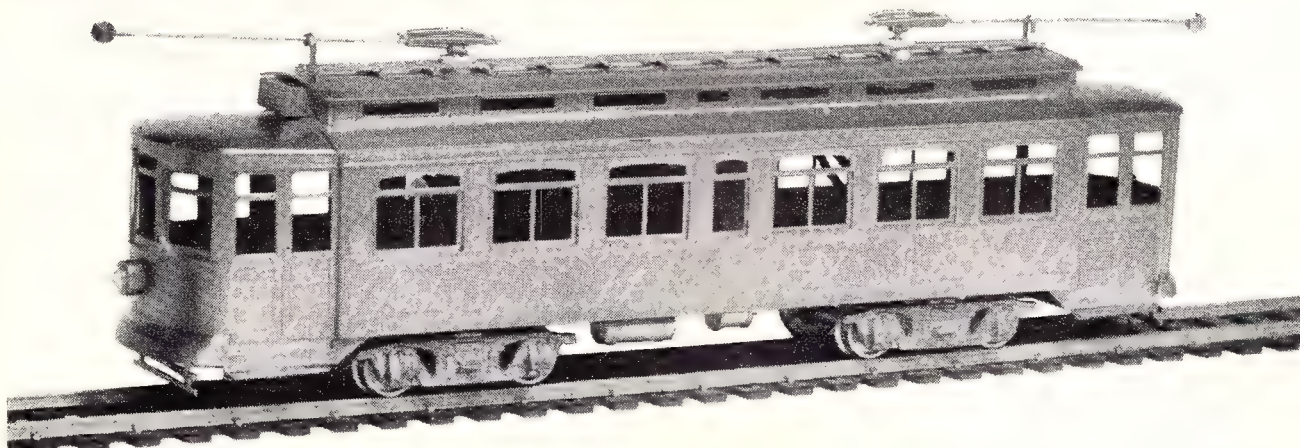
shopped painted, this neat enclosed cab model offers excellent value for the re-builder or otherwise, at £11/10/-... Now in stock — the full Rokal TT range, including all additional 1965 items... For those 'in steam', in HO or HO_{N3} gauges, Campbell Scale Models have delivered limited stocks of a fine, detailed Water Tower Kit, priced at 65/-...

Now in production are Fishplates to suit our new HO_{N3} Track. Price will be 2/- per dozen and supplies are expected shortly...

A new delivery from Cal Scale includes the new Hydra Cushion Set at 11/3 and the matching Knuckle Couplers at 5/9 per pair... Also from the U.S.A. and new in the Kadee range come the Spring 'Pic' at 11/9 and the 'Speedi' Driver Cleaner at 35/-... From Suydam come the following OO/HO structure kits: No. 7 Warehouse, 51/-; No. 8 3 Stall Roundhouse, 70/-; No. 61 Interlocking Tower & Shed, 31/-; No. 70 Town Depot, 69/-; No. 81 Junction Box Works, 40/-; No. 85 Meat Packing Plant, 49/-; No. 83 Citrus Exchange, 39/-; No. 504 Station, 35/6 and No. 522 Diesel House, 61/-...

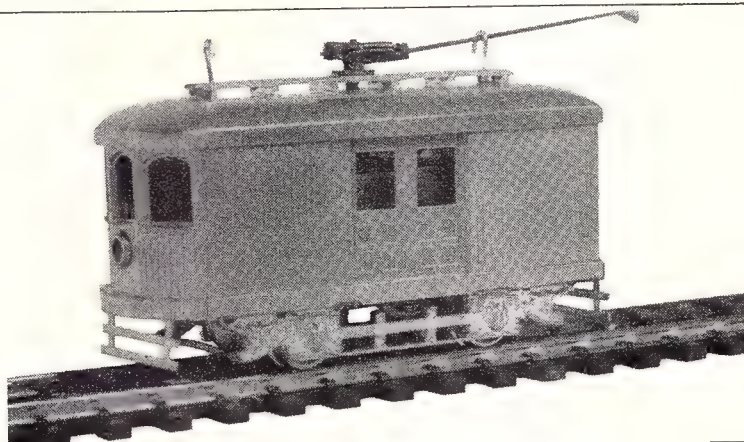
'Dockyard's new Model Engineers List is available at 1/6, post free. Includes our full range of B.A., Whitworth, American and Metric, taps, dies and nuts and bolts, Number and fractional twist drills, tools, gear, etc. 13 pages, in all... Cont. on Page 7

NEW! ELECTRIC CARS FOR CITY SERVICE...



ST. LOUIS PALACE CAR. A vestibuled Double Truck Saloon Car, suitable for city and suburban service. Of finest brass construction, this Car features etched sides, fully decked roof, drop hammered truck frames etc. HO scale to N.M.R.A. standards. Unpainted, ready-to-run 6 $\frac{3}{4}$ " over bumpers. Price: £12-10-0.

FREIGHT CAR. The ideal car for servicing running sheds, this single Truck Freighter car is of brass construction with 'wood engraved' body and drop hammered Brill 21E Truck. HO scale to N.M.R.A. standards. Unpainted, ready-to-run. 2 $\frac{1}{2}$ " over bumpers. Price: £5-12-6.



OTHER CITY & INTERURBAN CARS IN STOCK:

Double Truck Birney Car	£ 9-3-6	P. E. 1252 class Trailer	£ 8-12-6	S. P. 200 class trailer	£ 8-12-6
Max. traction truck Saloon Car	13-5-0	P. E. 1446 Baggage/Express Car	10-15-6	S. P. 750 Baggage/Express Car	10-15-6
Single truck Saloon Car	7-10-0	P. E. 1370 class Combine	10-15-6	S. P. 502 class Car	10-15-6
P. E. 800 class Car	16-15-0	P. E. 1200 class Car	10-15-6	Niles Trailer Car	9-0-0
P. E. 400 class 71ft. Coach	17-15-0	P. E. 1200 class Trailer	8-12-6	Niles Observation Trailer	9-7-6
P. E. 498 class 67ft. Combine	17-15-0	Indiana RR. R.P.O. Car	13-0-0	Niles Sleeping Trailer	9-0-0
P. E. 1800 class Combine	10-15-6	S. P. 200 class Car	10-12-6	Niles Baggage/Express Car	11-5-0
				All Rivarossi & Hamo cars also in stock.	

DOUBLE TRUCK PETER WITT CAR: £12-15-0

SINGLE TRUCK SPRINKLER CAR: £8-19-6

C. & L.E. FREIGHT MOTOR CAR: Approx. JULY

NORTH SHORE "ELECTROLINER": Approx. AUGUST

COMING!

ELECTRIC LOCOMOTIVES IN STOCK:

Baldwin-Westinghouse "D" class Steeple Cab Loco	£ 9-10-0	Spokane Box Cab Loco., with end platforms	£ 8-15-0
I.T.R. "B" class Box Cab Loco. (twin truck drive)	10-0-0	Butte, Anaconda and Pacific Box Cab Loco.	10-0-0
		Milwaukee Road "A" Unit Box Cab Loco.	27-0-0

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Krauss Maffei Diesel Hydraulic Locomotive with six-wheel bogies. The new motor bogie and transmission system, give the model exceptional power, smooth running and adhesion. The length of the units (each) is 9½

inches. They are available in two versions: No. 1238 is a double unit, with headlights at both ends, one unit being powered and the other contains a horn unit. Finished in yellow and lettered for the Denver, Rio

Grande and Western R.R. Price 13 guineas. No. 31804 is a single unit, in black with red cab lettered for the Southern Pacific R.R. Price 8 guineas. Deliveries of both units are expected in June.

But—order yours now!



The 'Rivarossi' range is so wide! Let us just look at these ideal items for the branch line or smaller layout. Firstly No. 42502 5 inch long 4-wheel passenger coach at 13/9 or the centre one

No. 42504 with the guards compartment, same length, same price, both green or coming soon the 1965 versions internally fitted Nos. 2528 & 2529 respectively at 25/6d. each. The

low-sided four wheel open wagon is No. 42039 at 9/6, and is nearly 4 inches long. Such an array in the "Rivarossi" range! Those old-timer trams with overhead wire, singly or in sets . . . more U.S.A., German and Italian prototype locos, coaches and freight vehicles. Check with your hobby shop now!

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LOCOS - COACHES - WAGONS - TRAMS, ETC., for OO/HO

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Trade Enquiries are invited.

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THE AUSTRALASIAN MODEL RAILROAD MAGAZINE

Vol. 2, No. 13, APRIL/MAY, 1965

Incorporating **THE BOOSTER**

THE OFFICIAL JOURNAL OF THE SOUTHERN CROSS REGION OF N.M.R.A.
Also THE YARDMASTER, The Bulletin of the Sydney Model Railway Society.

AUSTRALIA'S LEADING MODEL RAILROAD MAGAZINE

CONTENTS

RAILROAD AUTOMATION, by David Reddick	Page 9
TRANS-PORTABILITY	10
WATTS ALL THE CURRENT RESISTANCE TO UNDERSTANDING ELECTRICITY?, by Terence Carpenter	12
DUST, by Don Taylor	13
BUILD YOURSELF A MHG, by Chris Pratten	16
MAKING FLARE BASED DOMES AND CHIMNEYS, by Bob Mann	17
LOCOMOTIVES AT MELBOURNE'S INSTITUTE OF APPLIED SCIENCE, by William C. Fraser	18-17
REGULAR FEATURES:	
On the Cover	5
Shop Window	6
Shop Detective	14-15
The Scenic Route	20
Hints	21
Helper Service	22
Mail Bag	22
Club Car	23
Yardmaster	24
The Market Place	25

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Editorial...

WITH this issue we celebrate our second anniversary. Many were the scoffers when the idea of a fully printed "Booster" was first proposed. "You might reach two issues" was the cry. "There won't be enough readers" they said. "Nobody is interested in Australian modelling". Even the Editorial Committee admits that it had its doubts at first but the continued support from the many model clubs in Australia and New Zealand, and the regular arrival of letters from readers congratulating us on the magazine, made us feel that we had satisfied the need for a railway magazine in this part of the world.

Perusal of the contents of the first twelve issues will reveal that the number of contributors is rather small and a large number of them are directly concerned with the production of the magazine. We feel that this is mainly due to the fact that the average modeller in this region feels that he is not capable of writing an article of sufficient high standard to be accepted by the editor. This is a false conception. Every reader, whether he be a modeller or a prototype enthusiast, has ideas which should be shared amongst the enthusiasts as a whole and any contribution, no matter how small, that he can make will benefit everybody. Then there is the satisfaction of seeing one of your stories in print. A letter to the editor, even though its subject may be controversial, can make interesting reading and promote a verbal battle between the gauges, whether they be railways or railroads.

At this point it is felt that we must ask readers to give a thought to those advertisers who have supported us over the past two years for, without their continued assistance, this magazine would have found it difficult to maintain its present standard.

A REMINDER

N.M.R.A. members and subscribers of this magazine are advised to check their membership cards or subscription receipts and to renew their subscriptions so as to ensure continuity of delivery of the AMRM.

On the Cover...

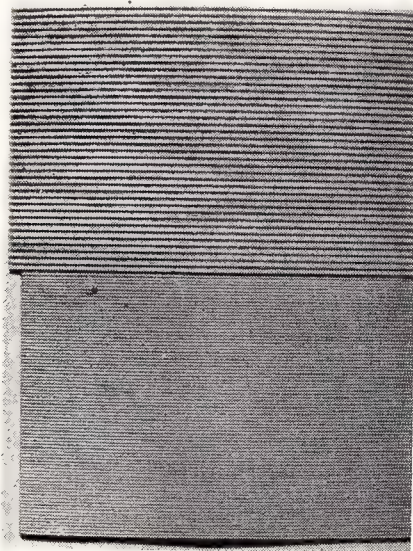
A 2-4-4 Forney pulling a full load of logs up a steep incline on the Chastity Mountain Logging Coy., HON3 line. Note how the track hugs the mountain side. There has been a couple of slides resulting in temporary trestles.



Corrugated Material

Manufacturer: Austral Modelcraft, Brisbane.
Price: 2/- per inch length.

Two types available to simulate both 3 inch and 6 inch corrugations. Sheet width 2½ inch, length 12 inches, the 3 inch corrugated material is 3/64" thick whilst the 6 inch is nearly 1/16" thick. A very useful material for either walling or roofing.



When you consider the prevalence of corrugated buildings in industry and railroad structures, it can be appreciated how useful this material will be to all modellers in recreating authentic realistic railway scenes on your layout.

HOn3 Turnouts and Track

Manufacturer: Shinohara, Japan.
Price: Track 8/- per 19½ inch length Turnout 26/6 each.



With the evergrowing popularity of narrow gauge in Australia, this new line

from this well known maker will be well received.

The product is well up to the standard of Shinohara's H.O. range of equipment.

The rail used is nickel Silver Code 70 conforming to N.M.R.A. recommended practice R.P.15.1 in all respects.

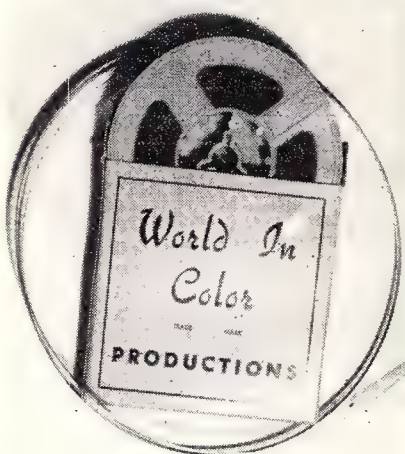
The track gauges out to N.M.R.A. Standard S1, whilst the turnout and track work also conforms to standard S3. These were checked out with micrometer and N.M.R.A. track gauge.

The turnout dimensions do not conform to recommended practices as set out in RP12-6. The frog number is number 4. The turnout length is only 3 inches long instead of 35/16 inch long, however this does not affect the operation in any way.

The main slip up has occurred in the tie department, the length is 7'6" long instead of 6 to 6'6" long whilst the spacing is 16 inch which is too close; should be 21½ to 22½ inch. Ties are 8"×4" whereas the prototype is 8"×6" however this is good as it gives the effect of the ties being buried in the ballast.

8mm. Movie Film — Steam Railroading

Produced by: World in Colour Productions, New York, U.S.A. Price: 35/- each.



This is a 50 foot black and white film made in conjunction with the A.T. & S.T. railroad. It depicts a Pacific class 4-6-2 loco hauling a well worn and blistered timber sided Baggage car and two steel coaches.

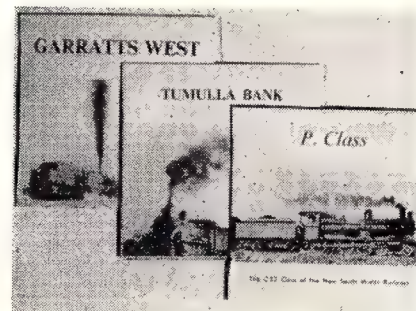
The film has one scene which makes it well worth while the steam lover adding it to his movie record. This scene is taken from another loco travelling in same direction on a dual track, of the drivers and valve gear in slow motion. This scene is rock steady and is well lit to show up every detail.

Other scenes include drivers cab shots, a hill climb with much exhaust and past runs. The film is well taken with adequate lighting.

Long Play Recordings

Produced by: J. Powe, P.O. Box 95, Rydalmere, N.S.W.
Price: 16/- each post free.

The three recordings reviewed are all further well produced recordings of well known steam locos in N.S.W.



This producer is rapidly building up a fine library of recordings, all of which capture all the glamour and thrill of the great steam era which is gradually coming to a close.

Garratts West — Have you ever heard the roar of double heading Garratts? This is a fine record of Garratts at their best plus some fine action of the 36 class on 1 in 40 grades.

Tumulla Bank — This bank is West of Bathurst. The climb is over the range and the Tumulla Bank is a 3 mile climb with an almost continuous grade of 1 in 40 plus a 12 chain reverse curve.

There is a good pot pourri of locos to be heard 36, 54, 38 classes and others.

P. Class — The C32 must be one of the best known of N.S.W.G.R.'s locos with over 191 being built by Beyer Peacock, Baldwin, Clyde Engineering and the Railway Workshops.

The class was a truly utilitarian loco and the recording is a good portrayal of the many sounds and moods of this class during its every day work.

HOn3 HO track Gauge

Manufacturer: Kemtron Product Co., California, U.S.A.

Price: Approximately 17/6 each.

These gauges check out accurately with the N.M.R.A. Track gauges as far as gauging is concerned. The lugs need filing to give the correct wheel flange depth gauging. Same applies to the coupler height lug. The gauge is a three point type and is not only necessary for laying rail in individual lengths but is a must when laying ready-made flexible track, as there is always a tendency for this track to contract to under gauge standards on curves.

Tweezer Set

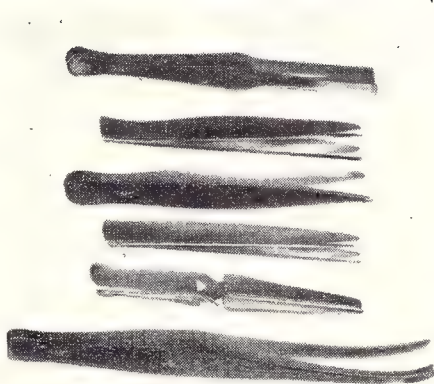
Manufacturer: Japanese.

Price: 6/6 per set.

This is a very inexpensive set of extremely useful tools for any model railroader whether a scratch builder or not.

There are six in the set and are plated to prevent rusting. The set pictured has been in use now for a couple of years without loosing any of their springiness.

There are three pairs of pointed tweezers one each light medium and heavy duty. One set of broad tipped normally



open type, one pair broad tipped normally closed, and finally one pair long curved ended tweezers.

All are useful and at the price well worth owning a set. They are on a card bubble packed.

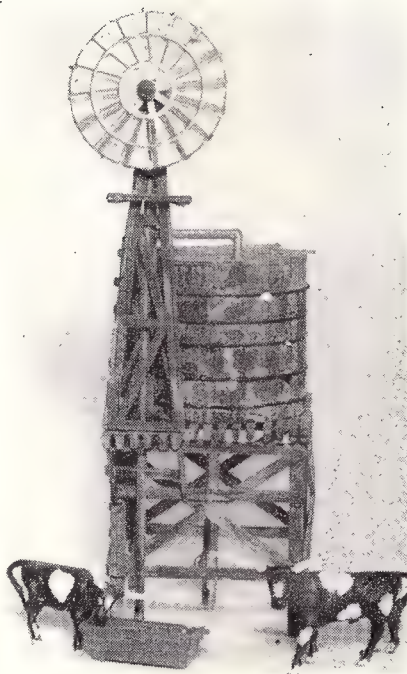
Windmill and Water Tank

Manufacturer: Truscale Models, California, U.S.A.

Price: 14/6 each.

This manufacturer is well known for the quality of their plastic castings and this kit is no exception.

The kit is presented in a well designed bubble pack and includes two longhorn steers, a water trough and a few pieces of lichen for shrubery.



The tank is 8'9" high $\times$ 9'9" diameter, whilst the base is 10'0" square. Overall height of tank is 20'6" and to top of windmill is 33'0".

The model glued together with a minimum of cleanup and the photo above shows the finished job painted and aged.

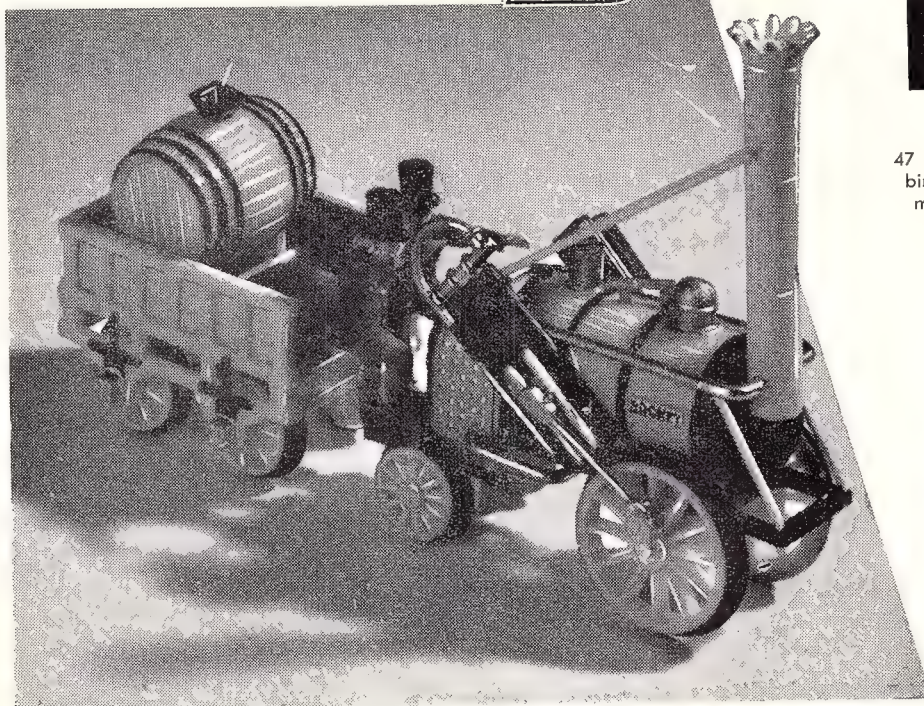
MODEL DOCKYARD (Cont.)

In brief, additional new motive power deliveries expected about the time this appears in print are: From Japan: 'United' HO C. & O. 2-6-6-2 Loco. & Tender at £53/10/- and 'United' HOn3 Rio Grande 'K-28' Loco. & Tender at £40/10/-. From the U.S.A.: K.T.M. 'O' N. & W. Y6-b 2-8-8-2 Loco. & Tender at £160, K.T.M. HO S.P. 'TW-8' 4-8-0 Loco. & Tender at £33 and North West Short Lines HO N.P. 'Q-6' 4-6-2 Loco. & Tender at £33. And something 'special' coming soon from Japan in HOn3 — a fine brass D. & R.G.W. Caboose at £5/1/6.

EXHIBITION ON AGAIN

It is with pleasure that we inform our readers that A.M.R.A. will again be conducting The Model Railway Exhibition in the Sydney Lower Town Hall on Friday, Saturday and Monday, October 1st, 2nd and 4th, 1965. Although completely controlled by A.M.R.A. the exhibition will be held in conjunction with the Waratah Spring Festival. Intending exhibitors are urged to make early reservations for stands. Modellers who wish to exhibit their models will be provided with locked show-cases. Insurance will be provided. Details from exhibition chairman, Mr. John Dunn, 26 Napoleon St., Rosebery, N.S.W. Phone 67-1542.

NEW FROM AIRFIX



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ROCKET

47 accurately scaled detailed-parts combine to make this exceptionally fine model of George Stephenson's locomotive Rocket, embodying most of the moveable parts of the original locomotive.

Complete with crew of two and designed for use on any OO/HO scale track, this model will make a splendid veteran addition to any layout.

Retail price 5/9 Kit No. R11.

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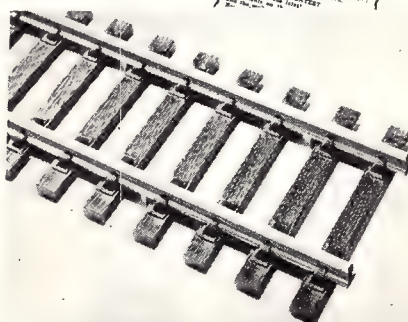
BANISH DERAILMENTS

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HO/OO FLEXIBLE TRACK



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- * Wood Grained Plastic Sleepers
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- * Always in Gauge
- * Fully Flexible — no ties to cut
- * British Made

No. SL-100X 10/6 per yard

And The Other "STREAMLINE" Necessaries, As Well

RAIL JOINERS, in choice of Short (known as Fishplates) in pks of 25 No. FB-13, in pks of 25, metal 3/9 or long metal type No. SL-10 (pk 24) 3/3 or long plastic type for insulating gaps. No. SL-11, pks. of 12 3/3 PINS for pegging down track, called Track Fixing Pins. No. SL-14, per pack 3/0 BALLAST. Brown plastic foam with indents for Track, 16 1/2 ft length 13/9 BALLAST. Bags of Granulated Dyed Cork in good mixture. per Bag 7/0 BALLAST SLOPES (cork) to join two tracks of different heights or to commence gradients. Pks. of 2 (No. SL-32) 4/6 TRACK CLEANERS, abrasive rubber blocks that do the job thoroughly without scratching. No. SL-37 3/9 BUFFER STOP KITS for all tracks No. SL-40 Rail Built Type, ea 2/9 No. SL-41 Sleeper Built Type, ea 3/3 Ask your hobby shop for latest Price List.

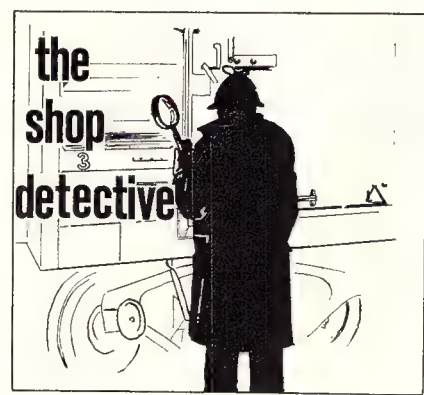
Points, Mark 11 "Y" Points, No. SL-97x, each 18/0 BALLAST UNDERLAY for same, No. SL-53, in pks of 2 4/6 POINT MOTOR without positive lock 12/16v. No. SL-70 9/9 ADAPTOR BASE for same for above basboard mounting, No. SL-7, ea 2/0 SWITCHES to operate same in four colours, size 1" x 3/4" No. SL-72 3/3 Coming Soon: 2' radius Left & Right Hand Points, Crossings & Ballast Underlays for same. "STREAMLINE" For 9mm Gauge N. (Prev. 000) SL-300x Flexi-track, per yd. 9/9 SL-310 Metal Joiners, pk. 24 3/3 SL-311 Insulating Joiners, pk. of 12 3/3 SL-350 Foam Ballast Underlay to match, 16 1/2' length 12/6 Coming Soon Points & Underlay. Peco Prices are uniform everywhere in Australia.



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HOBBY & TOY SHOPS Everywhere



Titcher's of Dandenong should be remembered as one of the few model shops in this country carrying a large supply of Kemtron products.

We might mention that this firm is agent for Victor HO repainting and lettering service which offers modellers who are heavy handed with the paint brush the opportunity of having their models painted and lined by an expert. Average cost is about 45/- per unit, for locomotives and 15/- for a tank car. Postage and freight is extra. Pamphlet on request.

By the way the Editor mentions that the Uma models mentioned in Titcher's advertisement of last issue should have read Lima. Our advertising manager has bought some new spectacles.

To hand the other day some fine samples of Clive McTaggart's three (3) inch and six (6) inch corrugated sheeting now produced. The product is a very welcome addition to his already popular woodsheet range. The 3" of course is to represent galvanised iron and the 6" is for fibro-cement sheeting. These two sheets look quite effective when painted in the following manner.

Iron, half silver and half grey; fibro, half white, half English coach cream and just a touch of black to grey the mixture.

To gain extra realism the sheet can be scribed across to actual sheets on a building.

Seen at Homecrafts, 307 Elizabeth St., Melbourne, D.P.D.T. switches 4/- each and D.P.S.T. at 2/- each. These are salvage stock, and have 1/2" mounting holes and 2 nuts to adjust depth of mounting. Electrical connection is by solder lugs. See Mr. Riley, and mention this magazine for discount.

Hearnes Hobbies, 303 Flinders St., Melbourne, also at 5 Collins St., have spruce in various sizes. Fine grained, smooth surfaced, I can recommend this for scratch building. Sizes include 1/8 sq., 1/8 x 1/4, 1/8 x 3/8, 1/8 x 1/2, 3/16 sq., 3/16 x 1/8 etc. Some sizes are 3' in length, some 4, Sheets of 1/8 x 3" x 3' are available. Tyco products may be had on 24 hours notice.

RAILROAD AUTOMATION

by
D. REDDICK

MOST people associate electric eye devices with automatic doors on public buildings or burglar alarms, but in fact these useful gadgets can have quite a few applications on a model railway.

The principle is quite simple. The electric eye beam, when interrupted, trips a relay which actuates the particular device required. In this way one can have operating level crossing gates or booms, protection for diamond or right angle crossings, signal and detector circuits that operate quite independently of the track. These are just a few applications; the possibilities are almost endless.

Perhaps the easiest method for the railway modeller is to use the selenium cell which is both simple and cheap and can, with the minimum of time and effort, be made at home. Other methods and apparatus may be used but in this issue we will confine ourselves to the selenium type. For quite some time selenium has been well known in model railroading as it is widely used in rectifiers. Its characteristic of being light sensitive was studied by early television experimenters over a quarter of a century ago. Selenium cells are quite easy to

make and one should make a batch at a time on a production line basis.

Use a piece of $\frac{1}{8}$ to $\frac{1}{4}$ " thick porcelain or slate about $2\frac{1}{2}$ " $\times$ $1\frac{1}{4}$ " in area. Cover this with an even layer of selenium on one side. The selenium is easy to spread when it has been heated to its melting point of 217 degrees centigrade. When the porcelain block has cooled it is wound with two thin copper uninsulated wires taking care to lay them parallel and close to each other as shown in the sketch. The wire ends are brought to two terminal screws which have been previously placed at one end of the cell in suitably drilled and tapped holes.

We must now sensitize our cell. This must be performed with care. Heat the cell to 210 degrees centigrade, which is just below the melting point of selenium, and maintain this heat for one hour. Allow the cell to cool slowly. When cool varnish it with clear varnish which will protect it from dampness or moisture. Platinum wire would be most suitable for the winding but is very expensive

and number 28 or 30 gauge copper wire is quite suitable. Now our cell or cells are finished and only need to be mounted in a suitable case which can be made of any suitable insulating material. Make certain that the uncoated side of the cell is completely covered with insulating material. Make provision for the two leads to the terminal to emerge from the case.

The principle of the electric eye properties of a selenium cell lies in its ability to adapt its electrical circuit to differentiate between light and its interruption, in our case caused by the passage of a train. If the cell is properly constructed it will show a substantial enough drop in resistance from dark to light to enable it to be used in conjunction with a suitable amplifier which will trip a relay. The relay in turn will actuate any desired electrical apparatus.

Perhaps by the next issue you will have some cells made ready and we will move on to the subject of amplifiers and methods of placing the light source.

"REALISM IN MINIATURE"

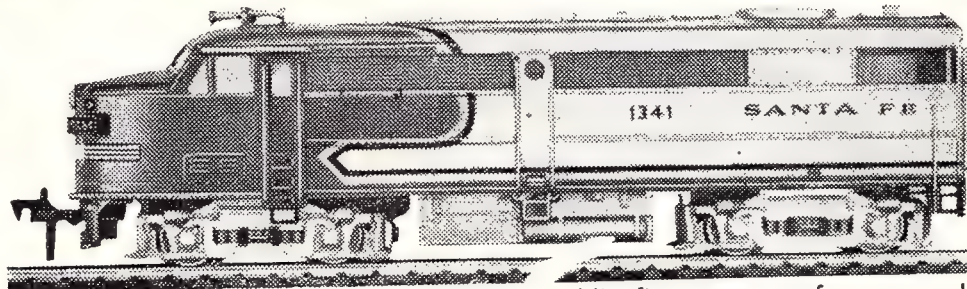
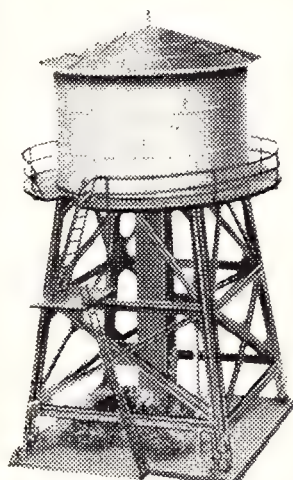
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TRANS-PORTABILITY (Hope for the Transient-Worker)

SCATTERED through the country areas, in every rural town, is a great army of teachers, bankers, railway and postal workers, Government and stock firm representatives and the like, all loosely called 'floating population'.

The average family moves every four or five years. Can the enthusiast in such a family produce a layout to give real satisfaction? The answer lies in compromise and a practical portable design.

As a result of this article, perhaps the club men and big enthusiasts will tolerate us, and perhaps a few more 'birds of passage' will be tempted by the modelling bug.

Every modeller eventually finds his ideal, though often it is incomplete for decades. My ideal is, of course, a permanent HO layout with sweeping curves and some big locos and easy gradients.

I am planning to build it — but not before 1990 which is when I retire. Meanwhile, let me describe how my layout has grown. Of course, it has tight curves, small locos and a really fierce gradient — but it works well and gives a mighty lot of satisfaction. Further to that, when the time comes to pack, it is no more embarrassment in size and weight than the average garage workbench.

And by the way, if readers can offer better suggestions or improvements, let's hear of them in this magazine.

General Layout

The layout has been constructed to represent a rural Continental scene about 1920, using the vintage Continental locos and rolling stock available from Germany, Italy and Austria. The original 6' x 4' provided double track with minimum radius, a back scene with hidden sidings, and a village. The first big extension provided ample yard, sheds and goods sidings.

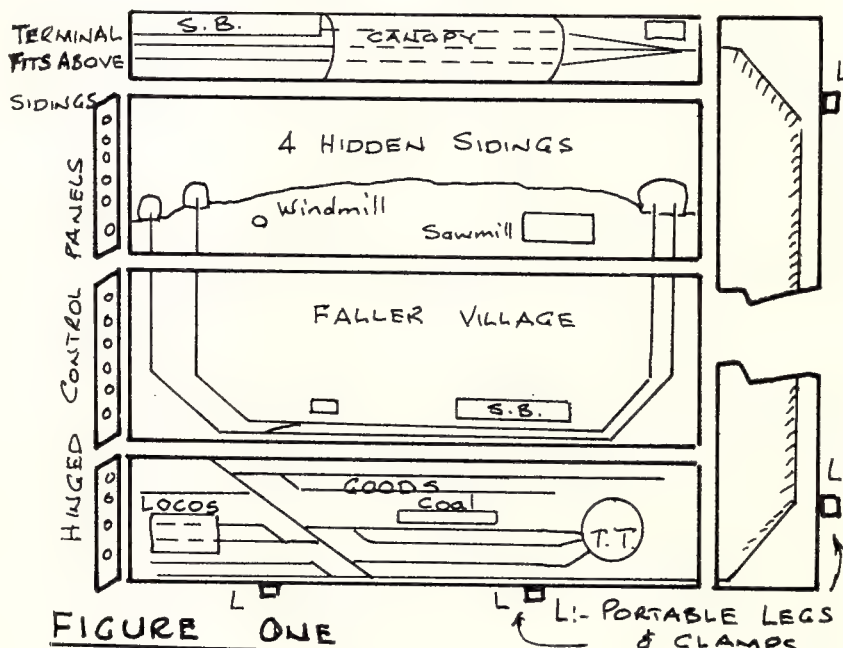
The last extension of gradient and terminal station has 'made' the layout and a thirty minute schedule can be operated using all equipment, and with no movement repeated. The size is now 7'6" x 6' and five boards are used. To dismantle the set, pack away equipment and fasten the boards in their racks is 30 minutes' work. To assemble it might take 10 minutes longer.

Several times during its career, it has been transported up to 50 miles for a demonstration by van or utility and the only special treatment necessary to set it going has been a quick clean and dusting.

Operation consists briefly of smaller locos hauling the trains to the hidden sidings, and the more powerful locos coupling on at the village station and returning them to the terminal, with yard movement and goods trains scheduled for variety.

Baseboards, Scenery and Controls

Following the accepted rules, I also found that 2"x1" timber in 12" squares

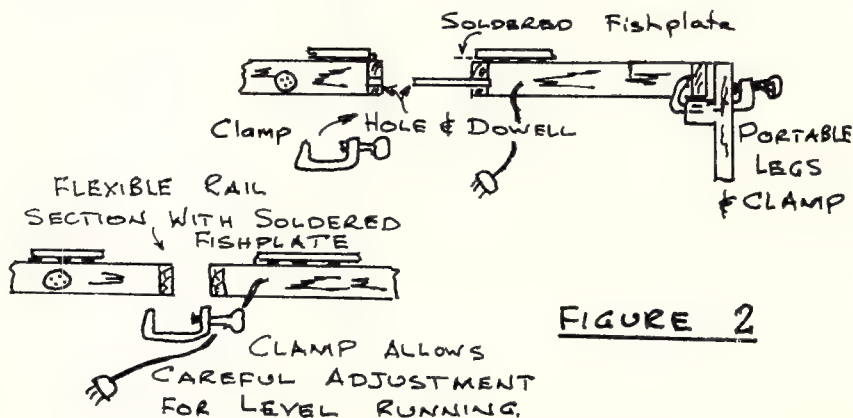


suited this type of layout. Aquadhere in tubes proved the ideal glue, and Caneite, from the weight factor, has been fairly satisfactory as a surface if paper is pasted on top, and track is glued before pinning. For backscenes, chicken wire and paper mache seems ideal, my method being to form the outline with the wire, soak sheets of paper in a water bucket and then tear and push the mess into shape, painting liberally with paste as

the thickness builds up. This is light, flexible and strong when dry.

Joining the boards quickly and accurately is a problem. I have employed two methods. (Figure 2.) Both have proved very satisfactory, provided that a plentiful supply of cheap G or D clamps is on hand.

For supporting the layout, a pair of simple folding trestles is best for the heaviest section, with lighter extension



baseboards supported by simple legs and clamps as illustrated.

Matt paints and dyed sawdust have been proved best for scenic work, and the wonderful Faller and Vollmer kits, with perhaps a working model or two, are a wonderful help in making a village come to life, but a word of warning — never fasten the church spire on its tower. For fastening the buildings and the other scenic odds and ends, nothing can better Araldite.

Section switches, point buttons and electrical controls I have found best placed on a panel hinged to the appropriate board. This obviates all need for large multi-pin sockets to each board and also the panel can be swung back for servicing or packing. Diagrammatic panels can be used to advantage by those who like them. For points and uncouplers near the control end, simple cable operation can efficiently be used.

EQUIPMENT

Rivarossi	Fleischmann
2-6-0 Class 625	2-4-0 Class 70
0-6-0 835	4-6-2 03
0-6-0 270	
Liliput	Kumato
4-6-0 Class 38	2-6-0 C.N.R.
4-6-4 62	(converted)

Rolling stock, Fleischmann and Liliput, fitted with Fleischmann wheels and couplers.

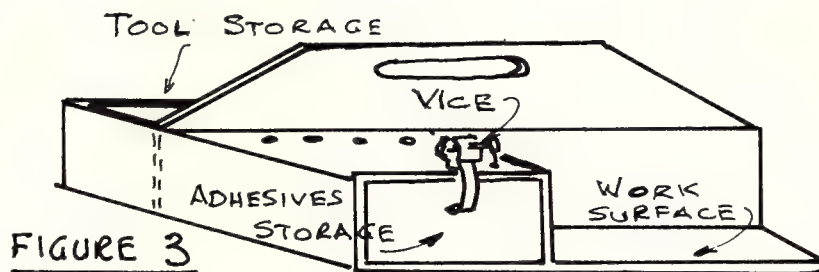
Having tried most of the popular makes in their various sizes and scales, I have found that for the portable layout, none can equal the Continental makes. Detail and performance are excellent, and provided that one does not spoil the effect with the largest equipment, they look realistic even on the tight curves. Although possessing a Pacific myself, I think that a 2-6-0 or 4-6-0 is quite large enough and the models fitted with traction tyres give a fantastic performance on the severe gradient.

All portable layouts are subject to strains and stresses far more than is usual, and track inequalities must occur sometimes. However, the robustness of Streamline track, and Shinohara points prove unbeatable in my opinion, and suit the Continental equipment. A combination of solenoid motors and cable for point operation works well, also with the uncouplers which are necessary for the Fleischmann couplers on all equipment.

I have tried brass models in small sizes. They are lovely models, and with sprung chassis can be made to work well, but their hauling power is very limited, even on the small trains which should be used on a portable layout.

Which brings me to rolling stock. Four wheelers only should be used, if realistic appearance is desired. The only exception to this rule is my Liliput 4-6-0 old timer express which employs 'shortie' coaches. Fitted with Fleischmann wheels, of course, for these give the most reliable performance on a portable layout.

A Safety Minor is sufficient for power, and by plugging it to the layout via a 6 pin plug, and also by similarly joining the various baseboards, speedy and reliable power connections are made.



Servicing

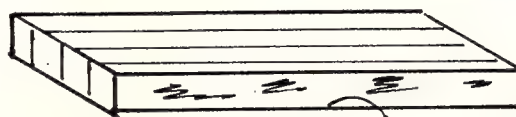
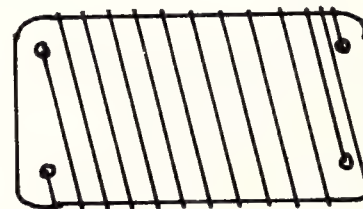
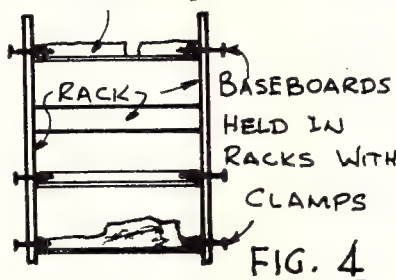
A portable layout is best serviced with a portable workbench, and the plan shown, Figure 3, has worked well. Whenever possible, the miniature good quality tools now available in the cheap stores should be purchased. The following list gives some idea of those few extra tools necessary to maintain such a layout.

1½" vice. Miniature hammer, hacksaw and files. 2 pairs pliers, (one sharp

nosed) 1 pair side cutters. Small spirit level. Small screwdriver with wire stripper. Set of small wood chisels and gouges. Dermic oiler. Electric soldering iron. Various punches and twist drills.

The portable workbench, complete with tools, is tidy, protects the kitchen table, and, if a standard saw, hammer and drill are available for occasional use, is all that is required to service the majority of layouts.

BASEBOARDS



COMPARTMENTS
LINED WITH
FOAM PLASTIC

Transport

Once again, the little screw clamp proves invaluable, and Figure 4 shows the method employed. With two such racks placed about 12" from the baseboard ends, and firmly clamped with the heaviest board forming the base, a strong unit, about 6' x 4' x 2' can be formed, and this can be lifted by two men.

For safe transport of locos and rolling stock, the double deck box (Figure 5)

can be easily made from the non-returnable dried fruit boxes obtainable from the grocer. If built as illustrated, with the compartments lined with cheap foam plastic table mats, all is held firmly and without possible damage. A lid completes the job.

So, fellow birds of passage, give it a go. You will be surprised at the success possible with a portable layout and a little ingenuity.

BACK NUMBERS

of this magazine are available at 2/6 each. Available are Nos. 2, 3, 5, thru 12. Add 5d. postage for first copy, then 3d. per copy thereafter. Make Postal notes payable to SCR Publications, Earlwood.

WATTS

ALL THE CURRENT RESISTANCE TO UNDERSTANDING ELECTRICITY?

A NUMBER of readers have expressed their inability to undertake any electrical refinements to their layouts due to lack of knowledge of electricity. However, I believe that with a little time spent studying the basic fundamentals, you will enjoy experimenting with a few various circuits using relays and signals.

In this article we will look at these basic fundamentals and later on will discuss a few ideas using relays to control trains and signals.

Firstly, we will briefly look at the Atomic Structure and Electron Theory. All atoms consist of a small central nucleus which contains protons and neutrons. Other small particles called electrons whirl around the nucleus in various orbits. However, we are only interested in the protons and electrons for the phenomenon known as electricity.

In some forms of matter these electrons can be separated easily from the nucleus and join another nucleus. To understand how this happens we must know a little about protons and electrons.

1. A proton is a small particle of matter which is purely electrical in nature. It has a positive (+ve) electrical charge.

2. An electron is a small particle of matter which is also purely electrical in nature. It has a negative (-ve) electrical charge.

3. A neutron is a small uncharged particle of matter.

The Electron Theory is based on the assumption that all matter is composed of minute -ve and +ve particles of electricity and assumes that all electrical effects are due to the ordered movement of electrons from atom to atom; since the electrons are whirling around within the atom, and being negatively charged, are attracted to another atom which is positively charged — i.e. has more protons than electrons.

The movement of electrons is known as current flow. Current flow has a number of various effects; it is these effects which are used to "make things go."

1. Heating effect is caused by the friction of moving electrons — increase current flowing through a conductor and it will become hot. This effect is used in electric soldering irons, lights, fuses etc.

2. Magnetic effect. An electric current sets up a magnetic field around the conductor through which the current is flowing. This effect is used in motors, transformers, relays etc.

3. Chemical effect. When a current flows through acids, solutions of metallic salts and other similar conducting liquids, a chemical change takes place in that liquid. This effect is used in charging car batteries.

4. Physical effect. Electric current causes muscles to twitch when passed

through the body. One golden rule. Don't be frightened of electricity — just treat it with respect.

One force which causes the movement of electrons is known as electro-motive force (e.m.f.) or voltage.

We have seen that the heating effect of an electric current is caused by friction. This friction or opposition to the movement of electrons is known as Resistance.

Conductors and Insulators. In a good conductor, only a small force or voltage is required to cause electrons to move from one atom to another resulting in current flow. Conductors have a low resistance.

In an Insulator the atomic structure is such that a large voltage is required to cause any movement of electrons. Insulators have a high resistance.

Below is a list of some of the more common conductors and insulators.

Conductors: Silver, zinc, carbon, copper, nickel, acids, gold, tin, aluminium, lead.

Insulators: Dry air, rubber, glass, porcelain, mica, paper, shellac, paraffin wax.

Various types of Current

Direct current (D.C.) is a unidirectional current which flows in one direction only through a conductor, and maintains a steady rate of flow.

Varying current is a form of D.C. which varies in value from instant to instant.

Pulsating current is also unidirectional but flows in pulses, having complete breaks when no current flows.

Alternating current (A.C.) regularly alters its direction of flow, first in one direction, reversing, and then in the opposite direction.

Units of Electricity

The unit of current flow is the Ampere (I). The rate of flow of an electric current is measured by the quantity of electricity, i.e. number of electrons, passing any point in a conductor in one second.

The unit of electromotive force is the Voltage (E). The electrical pressure is required to cause current to flow. The unit of resistance is the ohm. A conductor has a resistance of one ohm when an e.m.f. of one volt, when applied to that conductor, causes a current of one ampere to flow through it.

The relationship between Current (I),

Voltage (E) and Resistance (R) is known as OHM'S Law.

The current in a circuit is directly proportional to the applied e.m.f. (voltage) and inversely proportional to the resistance of the circuit.

It is not necessary to remember this statement, but you should remember the following formula:

$$I \text{ (current)} = \frac{E \text{ (voltage)}}{R \text{ (resistance)}}$$

or either of these

$$R = \frac{E}{I} \quad \& \quad E = I \times R$$

e.g. You have to operate a number of relays used as point motors from the D.C. output of the power pack. However, you must be careful not to overload the power pack. How much current is required to operate all relays at the one time?

Total resistance of relays = 240R

D.C. voltage 12v

$$\begin{aligned} \text{from our formula } I &= \frac{E}{R} \\ &= \frac{12}{240} \\ &= \frac{1}{20} \text{ Amp or } 0.5 \end{aligned}$$

If we have one loco drawing a maximum of 1 amp., and our power pack is rated at 2 amps, we could safely connect our relays to our power pack.

Perhaps you are wondering how to calculate the total resistance of a number of relays connected as point motors.

Firstly, we must know what is meant by parallel and series circuits. If we have a number of components connected in tandem, it is known as a series circuit. In a parallel circuit, the components are, as the name implies, connected in parallel.

To calculate the resistance in a series circuit, simply add the values of resistance together. The total resistance of a parallel circuit is slightly more difficult to calculate, however, once you get the idea you're right. Just apply this formula for different values of resistance.

$$\text{Total Resistance} = \frac{1}{\frac{1}{r1} + \frac{1}{r2}}, \text{ r1 and r2 being individual values of resistance.}$$

WATTS (Cont.)

$$\text{or } \frac{1}{R} = \frac{1}{r_1} + \frac{1}{r_2}$$

e.g. if we have 2 relays whose resistance is 200r & 600r:

$$1/R = \frac{1}{200} + \frac{1}{600}$$

$$1/R = \frac{3+1}{600}$$

$$1/R = \frac{4}{600}$$

$$R = \frac{600}{4}$$

$$R = 150r$$

You will see that the total resistance is less than the lowest individual resistance.

When 2 or more equal resistances are connected in parallel, this simpler method can be used:

$$\text{Total Resistance} = \frac{\text{Resistance of one path}}{\text{No. of resistances in parallel}}$$

e.g. 4 relays with 1000r resistance

$$\text{Total resistance} = \frac{1000}{4} = 250r$$

Finally we will look at the method for calculating the power or total energy required in a circuit. The unit of electrical power (P) is the Watt.

If we know the voltage and current in a circuit then the power = voltage $\times$ current:

$$P = E \times I$$

$$\text{or } P = I^2 R \text{ \& } P = E^2/R$$

e.g. We are drawing a current of 1.5 amps from the output of our power pack at 12 volts then the power being absorbed is 18 watts.

$$P = E \times I \\ = 12 \times 1.5 \\ = 18W$$

Therefore, overlooking a few more complex features of power in A.C. circuits we are using 18W of power from the supply mains.

The table below gives a summary of our electrical units and their relation to each other.

Unit	Symbol	Unit	Relation
Current	I	Ampere	$I = E/R$
		milliamp	$1\text{ma} = 1\text{ma}/1000\text{A}$
Voltage	E	kilo volt	$1\text{KV} = 1000\text{V}$
		volt	$E = I \times R$
Resistance	R	Megohm	$1 \text{ Megohm} = 1,000,000 \text{ ohms}$
		kilohm	$1 \text{ Kilohm} = 1000 \text{ ohms}$
		ohm	$R = E/I$
Power	P	watt	$P = E \times I$
			$P = I^2 R$
			$P = E^2/R$

Finally, some modellers who are not sure what is meant by the term open circuit, short circuit etc. will find the following definitions to be the answer to their doubts.

1. Closed Circuit, when any electrical apparatus is connected to a source of e.m.f. so that a current flows through it, the arrangement is called a closed circuit.

2. Open circuit, (O/C). This is a condition in a circuit when the continuity has been broken at one or more places, and current ceases to flow through the circuit.

3. Short circuit, (S/C). An S/C occurs when a part or whole of a circuit is by-passed by a low resistance path, and current does not flow through the correct circuit.

4. High resistance joint (HiR). When a circuit contains a faulty connection, either a poorly soldered joint or a loose wire under a screw terminal, an open circuit does not always occur. The result is usually a high resistance in series with the normal circuit.

DUST by Don Taylor

The model builder, as he gets his layout completed to the stage where he can begin operating, soon finds that one of his chief enemies is dust: Especially is this so if the layout is in a shed or garage, as many of them are. This fine dust settles on everything and, instead of the empire having a nice black, sooty look, it becomes a most unprototypical grey. Remarkably large quantities of the stuff settles on the rails and soon builds up insulating deposits on the wheels.

The solution? Some say a vacuum cleaner, but this only removes the worst of it, besides picking up odd pieces of scenery which make horrible noises as they go through the fan. Then the track can be cleaned in a sort of a way, by pushing a track cleaning car around the layout. Very time consuming.

Personally, I have found that a fine paint brush is the best thing for removing dust from rolling stock and fixtures, especially those of complicated outline. As for the baseboard, if you took my previous advice and painted it with GLOSS paint, a damp chamois will make an excellent job of it. The dust which remains between the sleepers, helps give the impression of ballast, for those too impatient to do the job properly in the first place. (Self included).

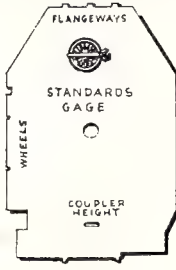
Best of all, of course, is prevention, and the simplest method of prevention is to cover the whole layout when not in use. This covering up has to be tried to be appreciated and I recommend it to all modellers. Mine is an island layout, 11½ ft. x 6½ ft., and has a wooden frame over it which is hinged to supports at the back. The front of the frame is attached to two ropes passing through pulleys secured to the ceiling. The frame is covered with a clear plastic sheeting used by builders, and obtainable up to 10 ft. wide. If you can find some blue material, perhaps the covering could be blended

with the scenery to produce a sky effect.

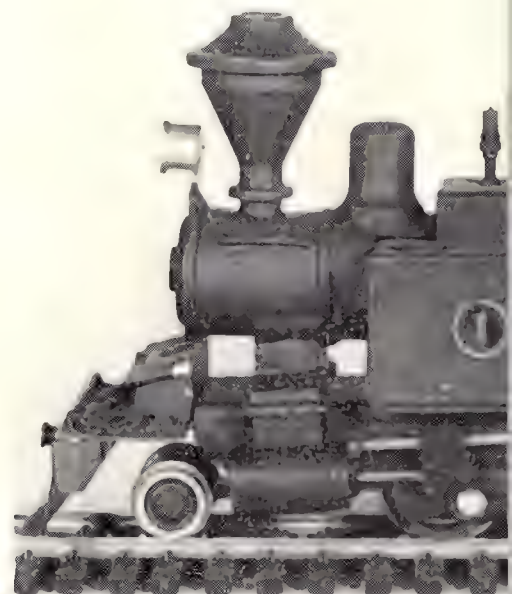
If you have an around-the-walls, or an irregularly shaped layout, it would still be worth while covering it by dividing your covering into sections. If the covers are on hinged frames, it takes only a matter of seconds to deal with each one. If you cannot arrange the frames, the layout can still be covered with loose sheets, strategically placed strong structures holding it above flimsier parts of the works.

As mentioned above, cleanliness really makes a difference in operation and appearance of the layout. It is only necessary to clean the track at intervals of weeks or even months, and then to remove oil, as much as dust.

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TOP LEFT: The Van pictured is a N.S.W.G.R. P van is the prototype of David Pratten's co

LEFT CENTRE: A freelance skeleton log car, s N.S.W. Car is HON3 and has link and pi

BOTTOM LEFT: Another freelance HON3 from fitted with Central Valley Arch Bar trucks. in Stop Window this issue.

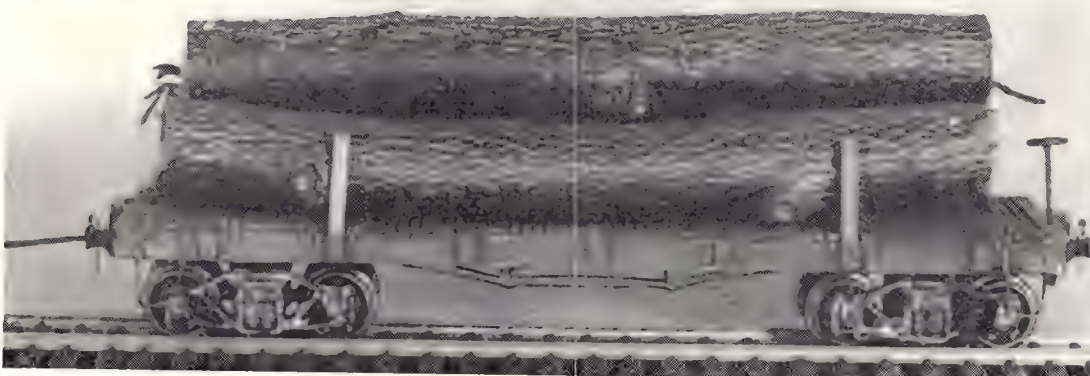
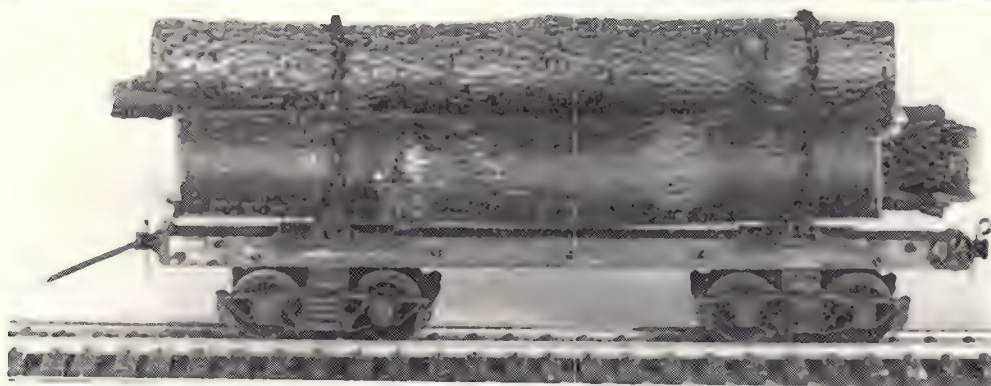
TOP CENTRE: Originally this was a Plantation Modified somewhat to a Forney type of pulling power, because motor could t.e to water tanks filled with lead right over w

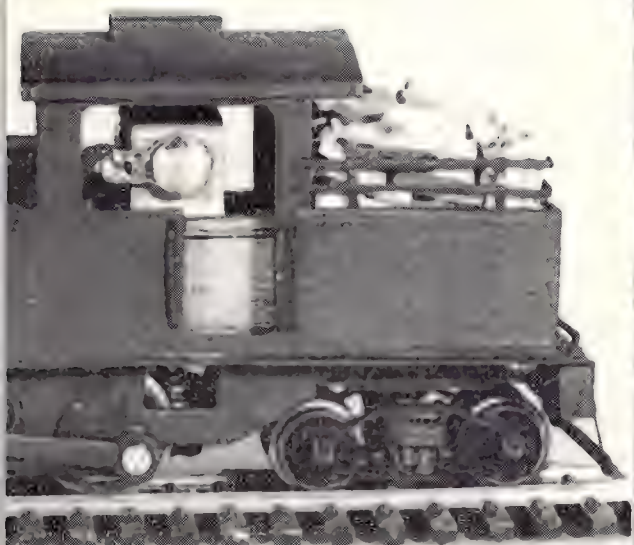
BOTTOM CENTRE: Double heading are two Vict at work in Albury goods yard.

TOP RIGHT: 46 Class electric loco in service w of Turrumurra, N.S.W., on the Electrified

CENTRE RIGHT: A fine piece of scratch built old of Glenroy, Victoria. Couplers are Kadee structed model.

BOTTOM RIGHT: Another of Charles Huggard's v National Caboose. Again scratch built and





ake Van. The loco a 59 class 4-6-2. The
ction article in this issue.

n built by John Wheeler of Turramurra,
uplers, Kemtron logging trucks.

same stable. This flat car with stakes is
ck is the new Shinohara HON3 reviewed

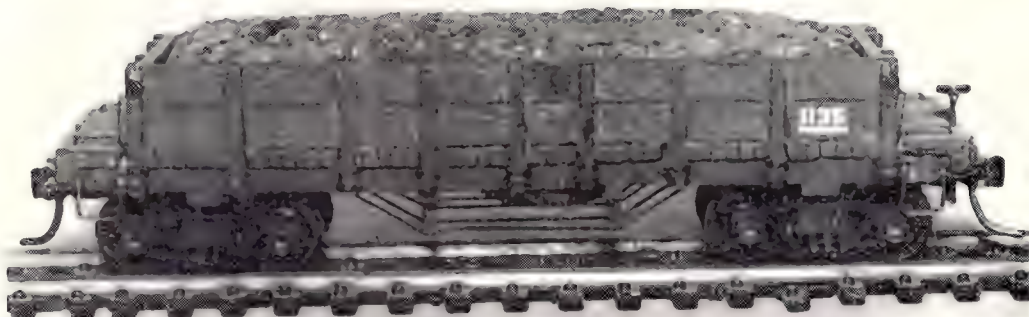
O HON3 outside frame Japanese import.
yful parentage to a 2-4-4 of exceptional
round to fit under wood pile and the
. Once again from same logging line.

Railways Diesel Hydraulic switching locos

he N.S.W.G.R. Photo taken by Jim Davies
ord run.

he gondola. The work of Charles Huggard
gnematics. All told a very neatly con-

built models of timber sheathed Canadian
ll detailed, good work Charles.



BUILD YOURSELF A MHG

In the Dec. 1964-Jan. 1965 issue I outlined how two Airfix British Railways kits could be butchered to produce a passable NSWGR four wheel goods brakevan, code CHG. Another NSW van which is very easy to make is the bogie goods brakevan, code MHG, (a photo of the van described in this article appears in the Scenic Route Dec./Jan. issue — Ed.) and its construction is simplified because there are so many parts available in the shops and actual scratch building is kept to a minimum. The parts required are as follows:

- One Sentinel MHG roof
- Two Sentinel MHG ends, one louvred
- Coil Sentinel handrail wire
- Pair Sentinel guards lookouts
- Set Sentinel MHG roof vents
- Pair BPR body bolsters
- Sheet CNL corrugated iron
- Length of Austral Modelcraft centre sill and van flooring
- Sheet thin ply
- Sheet window material
- Staples and card strips for lower steps
- Bogies and couplers of your choice
- Outline drawing and photo of the MHG, available from the Publicity Dept., Dept. of Railways, N.S.W.

A sympathetic wife to clean the shavings off the lounge room floor in the mornings.

Construction is very straight forward, but a few points are worth mentioning.

The Sentinel roof and van ends are a little big for 3.5mm scale being more in the vicinity of 3.8mm. I cut the roof down to the correct length and left the ends as they are, and the result seems quite acceptable. The Sentinel ends have bosses cast on to them to enable the van walls to be fixed — these may not be exactly the right distance in from the edge, depending on the thickness of the ply sides, so check this point before you get too far advanced.

The Austral Modelcraft floor is too narrow for the Sentinel ends but by cutting a piece of centre sill up the middle, you get two pieces of angle wood which can be glued to each side of the floor, giving the additional width needed and also providing the top steps of the van.

The CNL corrugated iron, which is available from the Model Dockyard for a few pence (send 1/6 for their HO list — it's well worth it), makes excellent louvres for the sides of the van. Strips can be cut to the required size and let into the ply sides slightly so that the iron is flush with the side. When painted this gives an excellent louvre effect.

The position of the handrails may be determined by consulting the Department's outline drawing and photo, which are a must for anyone building the van and are only a few shillings. A collection of such plans and photos makes the apparently formidable task of scratch building local prototype models much simpler. Any wire can be used for the rails, but a tarnished brass colour looks effective when the ends of the rails are painted and the centres left clean to give the impression of being polished with use.

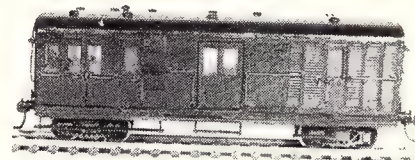
The Sentinel ends have holes provided to take the end handrails. In the louvred end, one set of holes are out of place and must be filled and a fresh set drilled.

Be careful to consult the outline drawing carefully when cutting out the sides, as the two sides of the van are different in the positioning of the lookouts and a couple of doors.

I constructed the lower steps from staples and card; the staples cut for brackets and stuck into the base of the top step, and strips of card for the steps themselves.

My model is fitted with Kadee couplings and 36 in. Tenshodo bogies and is painted a fresh 'out of the shops' colour to contrast with the drabness of some of my other rolling stock.

by CHRIS PRATTEN



SYDNEY SUBURB HOLDS ANNUAL EXHIBITION

The exhibition held annually at Hurstville has come and gone for 1965. Despite an impressive display, the attendance was noticeably poorer than in previous years. Although technically a success, much has been learnt about this phase of model railroad activities.

The line up of displays included the very impressive layout built by Les Marsden and his sons. This is a TT gauge layout, 32' long by 10' wide. Les can run as many as five locomotives at once, with shunting and main line facilities being superb. An intriguing feature is the 9mm. coal mine loco, on an elevated track.

Another private layout was that of Jim Nichols. This 9' by 5' layout has scale track, and is very simple and robust to operate.

The Aurora Model Railroad Club, President Roy Baxter, displayed a basic type layout, 6' by 3', using Universal type track.

Some very fine O gauge, two rail-stud was displayed by the builder, Bob Harvey, a member of the Sutherland Shire Club. These well detailed and accurate models have been built by Bob over many years. His enthusiasm runs to the mounting of a tinplate tank loco on the bonnet of his car.

Probably the most amazing layout ever seen comes from Arthur Sherwood, of Chatswood. Arthur is a real snob, who invents his own gauge. It has not got a name yet, but the actual gauge is a little under one quarter of an inch, with a scale of 20' to the inch. His wife receives the credit for the scenery. The actual train lengths are approximately 10 inches. His armature windings are done with two-thousandths of an inch wire, and the wheel flanges are fifteen thou.

An eye-catching display was that of the Sydney Society of Model Engineers. They had several of their live steam, 2½ and 3½ inch locomotives running on compressed air. During the times when the attendance was low, Jack Harvey, Society Secretary, compressed air into the cylinders of his 3½" C38, up to about 60 lbs, and sent it rolling down the hall under its own power. The loco travelled about 100 feet on this much air.

The exhibition was organised in its initial stages by Peter Lucock, St. George Club, and later finalised by the combined Committees of the Aurora and Sutherland Shire Clubs. Run to benefit the Hurstville branch of Legacy this year, we must pay tribute to the hardworking Legacy Ladies. They provided the workers with cups of tea and the meals.

Bexley North Hobby Centre

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WILLS FINE CAST LOCO KITS:

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A METHOD OF MAKING FLARE BASED DOMES and CHIMNEYS

by Bob Mann

If you want an odd dome that's not available commercially or are trying your hand at scratch in an odd scale, like Sn3½ which is common in N.Z., try turning it up on a lathe.

The first essential obviously is a lathe or access to one. Once this hurdle has been cleared this method has the advantages of being relatively simple and quick. One dome should be finished in half an hour. Here then is a step by step summary.

(1) Select brass stock of sufficient diameter to cover the amount of flare and allow length to cover height of dome plus about one inch to enable work to be held in lathe chuck; (2) a self-centring chuck is best, so insert brass and turn the end clean, this is important, as it is the bottom edge of the flare.

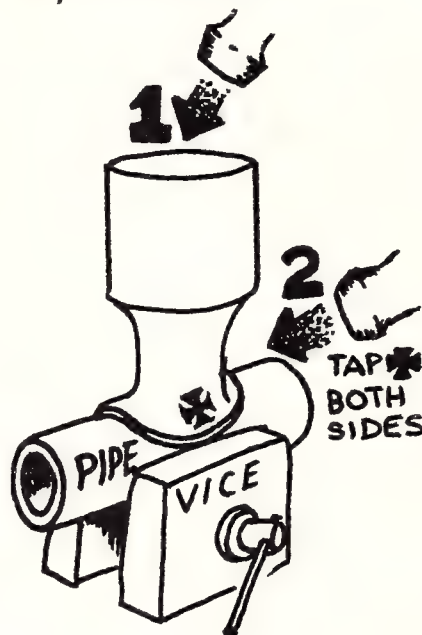
(3) Shape top side of flare and bottom half of dome (like the bottom half of a bell); (4) then under cut the flare and base, leaving a flare approx. ½—1mm. thick; (5) remove from chuck and hammer firmly, flare down against a pipe

which is secured in a vice, making sure not to turn brass whilst hammering.

(6) Tap outside of flare down lightly so as not to bruise the brass, now see if it fits that boiler; (7) once satisfied that the flare will fit the boiler, put it back in the lathe and turn to final shape.

Now a word of warning — watch out for the flare and do not turn the dome off the stockpiece or it may be damaged. Cut the last ¼" with a fine saw.

In the case of a funnel, bore the hole in the top before cleaning up, making sure it's in the centre. A centre punch and a good quality drill bit are essential and work may be held without damage between two piece of softwood. Give it a go or you'll never know — to which we add, practice improves techniques and tempers . . .



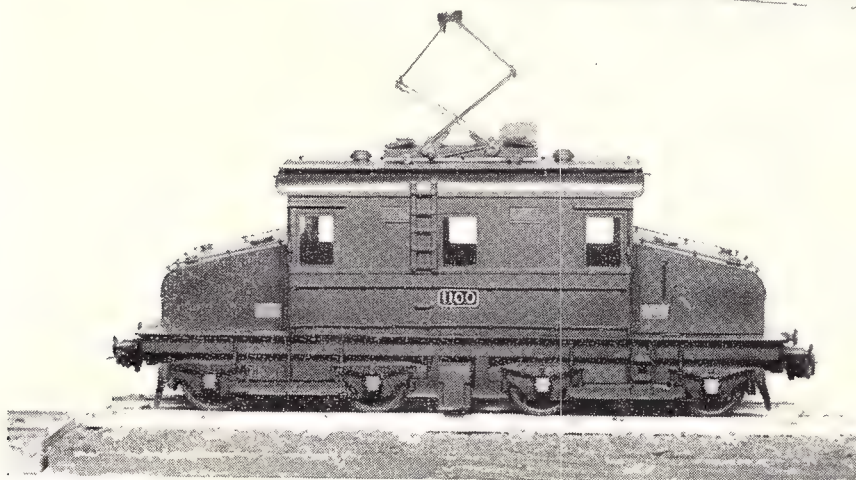
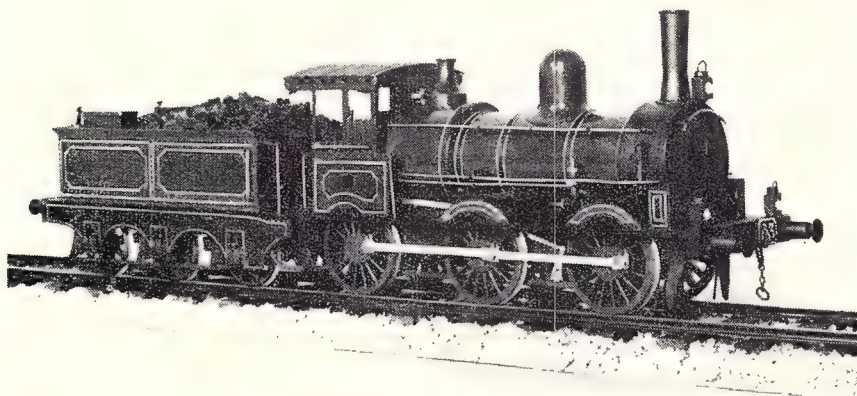
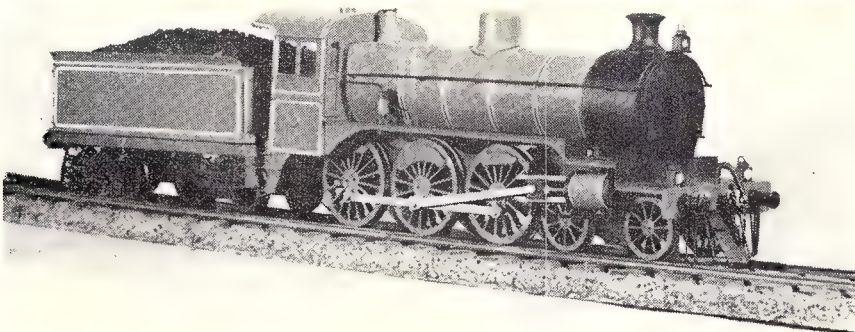
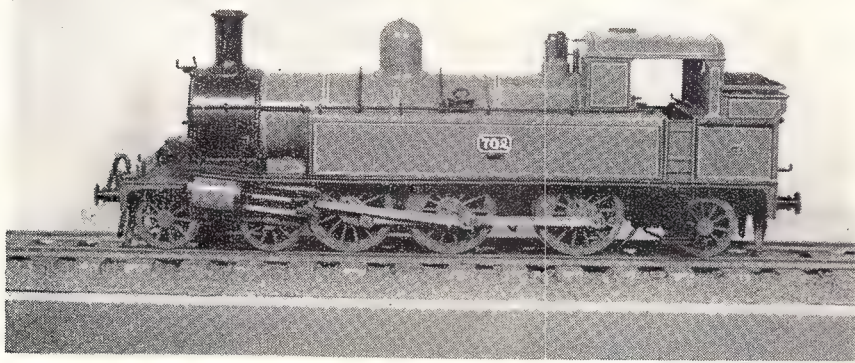
Blue Mountains Railway Society

Invites you to come to GOULBURN on Sunday 30th May, 1965

Here is a unique opportunity to travel behind a C.38 steam locomotive on a run which will attempt to set a new record non-stop from Sydney to Goulburn. We will return via the Mittagong-Picton loop line. Buses will meet us at Goulburn for a run to a 2' gauge live steamer and to the railway yards. So for speed, excitement and steam come with us to Goulburn on Sunday May 30th.

TIMES:	Leave Sydney at 9.45 a.m. Return at 6.05 p.m. Stops on return journey only at Liverpool, Regents Park and Strathfield.
PHOTO STOPS:	On return journey only will be provided frequently.
MEALS:	Goulburn Station RRR will open during our stay.
FARES:	(All inclusive) ADULT £3-2-0 CHILDREN £1-12-0.
BOOKINGS:	Accompanied with remittance made payable to BMRS RAIL TOURS to 9 Lagoon Drive, Blaxland or 8 Skarratt Street, Glenbrook. Money orders and postal notes payable at Katoomba. Tickets will be posted 10 days before travel.

'Phone enquiries — Glenbrook 7 1291 or Glenbrook 7 1242 (after 7 p.m.)



Model Locomotives On Display At Melbourne's Institute Of Applied Science

by

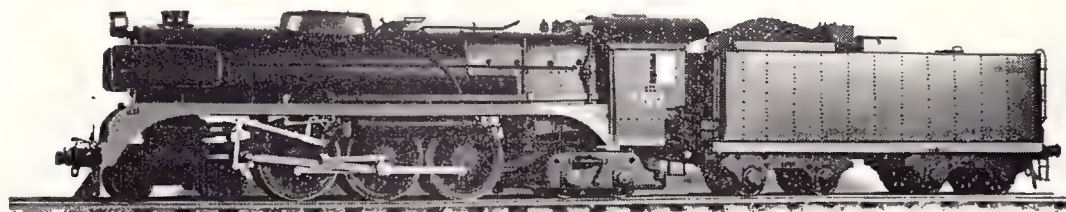
WILLIAM C. FRASER

1. A D-De class engine of 1908.
Scale: 1/48.
2. An A-2 locomotive of 1907,
built by the V.R. Scale: 1/48.
3. A Q-class locomotive of 1873,
used for goods hauling.
Scale: 1/48.
4. An E-class electric locomotive
built in 1923. Scale: 1/48.

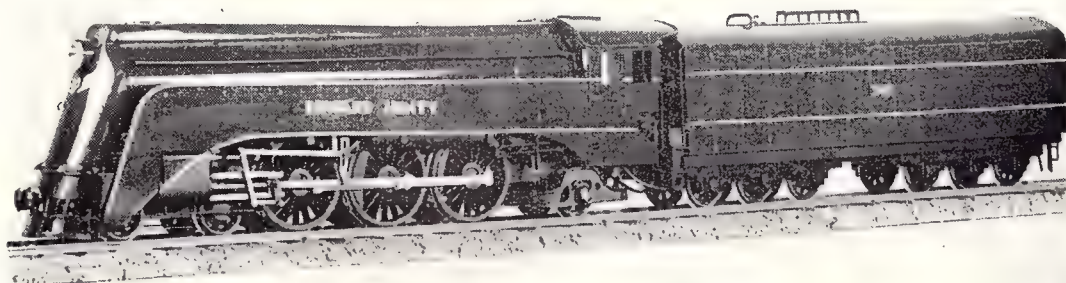
1. An H-Class
(‘Heavy Harry’)
engine dated
V.R. 1941.
Scale: 1/48.



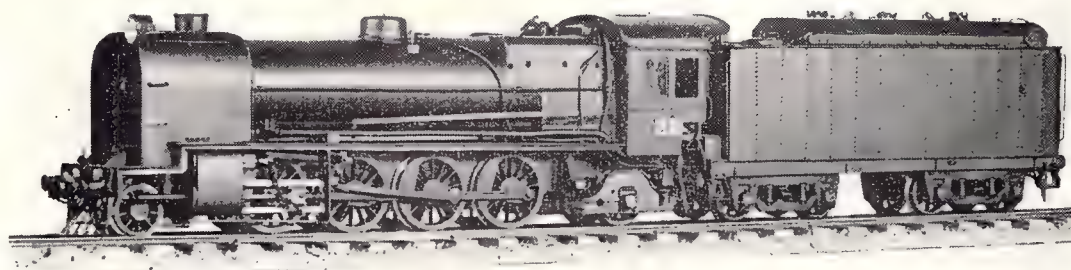
2. An R-Class
locomotive
of 1951.
Scale: 1/48.



3. An S-Class eng-
ine used by the
V.R. in 1928
and run as
locomotive for
‘Spirit of Pro-
gress’ 1937.
Scale: 1/48.



4. An X-Class
engine of 1929.
Scale: 1/48.



5. A B-Class
Diesel-Electric
passenger and
heavy goods
engine of 1952.
Scale: 1/48.

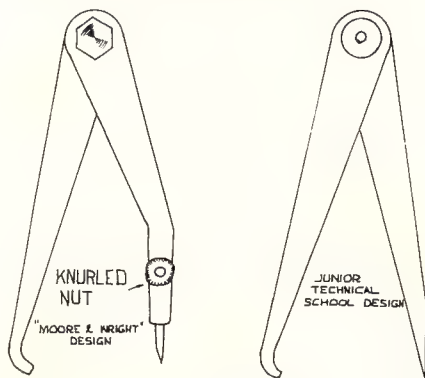


HINTS

TOOLS FOR METAL WORKING No. 1. "The Jenny Calipers"

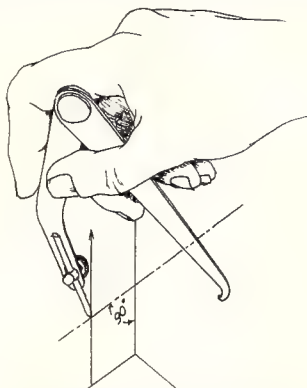
These are also known as odd leg calipers, or perhaps a little unkindly hermaphrodite calipers.

Your hand tool collection may already include these useful calipers. If not they are easy to make if desired.



The Jennys are mostly used for scribing one or more lines parallel to an edge, either curved or straight, and it is doubted whether any other method can rival the use of Jennys, for such ease and accuracy of producing parallel lines in such circumstances. Another use is the centering the ends of round stock.

The illustration shows the tool in use. When scribing it is necessary to keep the line joining the caliper points at right angles to the line which one is following.



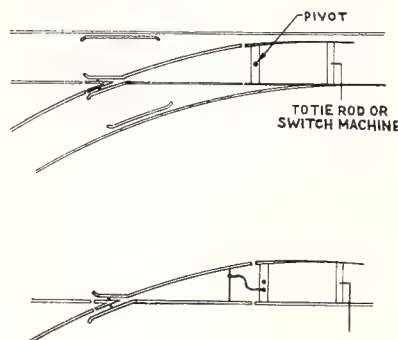
Making Poster Colours More Adaptable

Poster colour, when used on structures, gives a flat finish. A weathered finish is easy by dabbling with appropriate colours. That's right, it works fine on balsa and card but it won't take over glue or metal corrugated iron. Don't throw your poster colours away — a good plant shop has the answer to this covering problem.

What you need is a couple of drops of wetting agent. In Melbourne there is one called Agral-LN and so far as

I can gather is used in sprays to ensure wetting and spreading in agricultural work. Mix your paint and add a drop of wetting agent and the poster colour goes on like normal paint.

Connecting Point Blades to Frogs

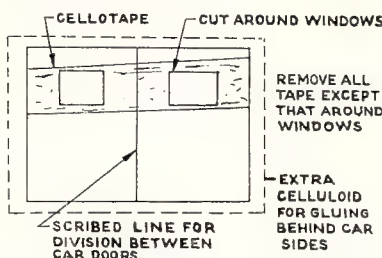


Many of us lay our own track and build our own points. Some make the blades and frog in one piece, but others make the frog and blades separately as shown in the first diagram.

A problem here is to electrically connect the blades and the frog. This connection needs to be flexible and inconspicuous. It may sound crazy but five amp fuse wire works like a charm. The wire has to be bent for flexing as shown in the second diagram. Bend it first, solder it down and you're in business.

Modern Steel Vans

The modern guardsvan, in South Australia and Victoria, is steel sided with panel doors. These doors have flush windows. This is difficult to model because an overlay for the door panels has to be cut out and backed with clear celluloid for windows.



There is an easy way to get these done quickly. Build up the car side with the door aperture cut out in the normal way. Cut a piece of clear celluloid for the doors, leaving enough for glueing to the rear of the car side. Glue this piece in place and allow to dry.

Cover the door window area with sellotape. This doesn't have to be square but must completely cover the window area. Use coloured tape to prevent your eyes crossing before you finish. Mark out the windows and cut out the tape. Remove all the tape except that covering the area.

Paint the car and when dry remove the tape. You now have windows in a flush door. This, of course, can be used to produce windows in any vehicle that are flush or nearly so, with the car side.

Point Conversion

Have you ever seen a turnout for sale, cheaper than the type you use on your road, and wondered if you can use it, with your locos and rolling. With a little thought, you will see that converting that turnout might not be such a big job after all.

This topic was given birth by a debate overheard in one of the big hobby shops in town (definitely, no plugs), when a gentleman enquired if Tri-ang points would run his TT Rokal gear. In an actual experiment, it was found that modifications to the point would take about twenty minutes, by taking out the guide rails on the insides of the turnout rails. Then place a plastic or mica strip in the gauge. This is necessary to allow the thicker flanges of Rokal to pass through without riding up over. Then gouge out the frog bottoms, to allow the deeper flange.

What other points will lend themselves to conversion. I have seen Tri-ang OO, with the curved blade shaven to a thinner taper, to take semi-scale stock. Here, it may be expedient to make other electrical arrangements, than the manufacturer provides.

It is possible to gouge out the depths of Shinohara frogs, to take Tri-ang and Hornby Dublo flanges. For breakages while working, a little Araldite can be a useful item in the tool box. This material takes about 24 hours to set from its semi-fluid state, and when dry, can be tapped, drilled and treated like a soft metal, and will stick to an amazing variety of surfaces.

There are lots more possibilities in this field. No doubt the Editor will be glad to hear from you if you have done some interesting conversion.

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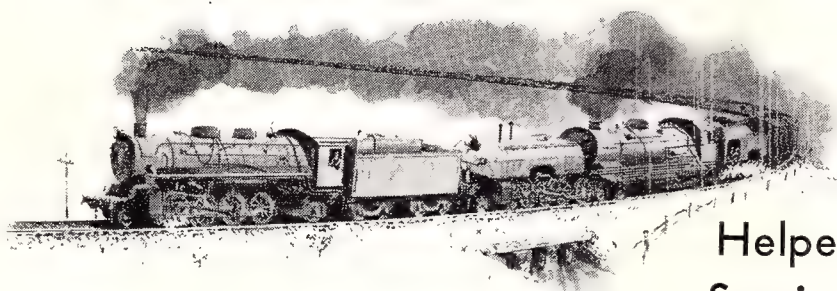
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Please include 10% for packing.

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Helper Service

MODELLERS. What are your problems? Write to this magazine and we will endeavour to put you on the right track.

Q.: Could you name for me brands of track on the Australian market which are to HO Standards for N.M.R.A.? — J.M.D.

A.: Shinohara track would be the best known in this category, and their range lacks nothing really except a diamond crossing with a frog angle of 6, for use with a double track turnout. For those requiring this item, we recommend using Peco Code 100 track and laying the crossing itself by spiking. Peco Streamline track is to N.M.R.A. Standards, and although slightly higher in the sleepers themselves, is readily combined with Shinohara points; many prefer this combination, as they find the more readily flexible Peco, easier to manipulate. Peco points are not to N.M.R.A. Standards, and equipment with scale wheels will not operate with reliability over Peco pointwork. A new version of the Peco point is soon to be available in Australia, but as this is designed for the coarse wheels of the U.K. and Europe, it is not likely that it will be of much use to the scale modeller.

Expressway track, also of Japanese origin, will appeal to those with limited funds, and with perseverance, can be successful, however, due to its much lower quality, and the extreme weakness of the sleeper chairs, we feel that if this is a first attempt, you steer clear of Expressway. Very little has been heard to date of Cassadio track, but the reviews of this Italian product, in the U.K. model press were almost glowing. In snap track, Atlas is of course, best known, and Fleischmann, while slightly higher, can be used; with the latter, however, points are once again, designed for heavy flanges.

Oddly enough, both Atlas and Fleischmann are available only in brass, not nickel silver. Jouef (Playcraft) and Hornby aCHO track, are also on the consideration list, and if you wish to deviate from the generally used Shinohara and Peco, you would be wise to hasten slowly.

Q.: I am modelling N.S.W.G.R. trains, and I would like to know what locomotives, rollingstock and lineside accessories etc., are produced to suit the N.S.W. scene — G.V.H.

A.: Very little equipment has been produced specifically for the N.S.W. modeller. One notable exception is a Japanese brass model of a C.38, which you will have seen in earlier copies in our advertisers' columns. This locomotive has wheels strictly to N.M.R.A. Standards, and will only operate successfully on suitable track, and in the first batch, certain items were not quite correct. This model is of the unstreamlined type, and is delivered un-painted. The production of Tri-ang models in Australia, did include a representation of the Sydney suburban sets, which, while basically

sound, included some rather indifferent features. However, we have seen quite a few suburban sets, worked on by experienced modellers, and these then, were a very fair representation of the local scene. We understand that these cars are not now readily available, and perhaps production has ceased. Finally, parts are available from Sentinel for the making up of an M.H.G. guards' van, but to date, the most difficult part to accurately reproduce, the sides, are not available, and have to be prepared.

This virtually covers what is available ready prepared for N.S.W., but you will find quite a few items from ranges like SuperQuick, and Airfix, that are close enough to satisfy most folk. Many four wheeled pieces of rolling stock may readily be made up on chassis from Hornby-Dublo rolling stock, using scribed wood, etc. Peco wagon chassis kits can also be helpful. Helper Service invites all interested modellers to forward their findings in this field, so that we can prepare a listing of brand items that will fit the Australian scene, and who knows, over a period, manufacturers will perhaps take an interest in our market?

Q.: Your comment re Fleischmann in the second last answer in the Feb./Mar. issue causes us some concern. Fleischmann is clearly, and repeatedly noted as HO in their catalogues and brochures. Do you have the audacity to seriously doubt the products of such a reputable company? — R.T.

A.: It's not that we are audacious, it's just that we know how to use a scale rule! If you doubt us, measure up, and compare, for example a model of the Deutsche Bundesbahn diesel class V 200 in Fleischmann and Marklin. Fleischmann track, too, while admittedly robust, and reasonably realistic, if you accept brass rail, is .010" higher than the accepted Code 100 generally used for HO model work.

Q.: My idea of prototype appearance is offended by the newness of shelf models for my railway. Can you give some details of what I think is called 'dirtying up'? — P.A.M.

A.: This subject is covered in many articles in the model press, and over a period you will come across these. Dirt, or sheer filth, and sun fading are the two main avenues to follow, and good quick effect is obtained by dribbling a dirty wash over the model. The wash can be made up from one part matt white, four parts matt black, two parts matt khaki, and eight parts turps or thinners. However, check that this wash does not attack the plastic work too greatly, and for a starter have a practice on say a tin, or a discarded model. At a later stage you can simulate filth characteristics for certain localities, for example iron ore wagons will accumulate

a surface powder of rust in addition to basic rust and deterioration of the car itself.

Q.: Would you say that Airfix rolling stock is worth considering from the operational point of view, or are these kits only suitable for yard appearance? — R.E.M.

A.: Perhaps the three best known brands of U.K. rolling stock are Hornby-Dublo, Tri-ang and Airfix, and of these Airfix undoubtedly have the finest detail. However, the first two are ready to run, on their own systems that is, while the third, Airfix, requires some additions to be really trackworthy. For best results, fit Peco journals to the Airfix solebars before assembly, using a no. 42 drill to clear the holes, and on assembly use Jackson (Nucro) wheels of the correct flange contour for your track system. Add some weight, as low down as possible, about four ounces is usually adequate, and you will have rolling stock of impeccable detail, and as reliable as any.

You will probably find it preferable to paint the underframes black before the addition of the superstructure, and to fit your couplers at least prior to final cementing on of the upper works. Semi mass production is worth considering, doing perhaps six kits at a time.

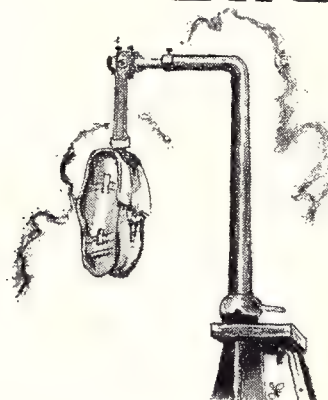
Q.: When I change the points on my layout, trains almost stop for an instant. Why is this?

A.: Presumably you mean that your points are operated electrically, from the A.C. output of your power pack. In such an instance, the brief, but nevertheless excessive current drain, while brief enough not to operate the circuit breaker, robs sufficient current to slow the loco. No doubt, whenever feasible, you set up the points for a journey before actually starting up the loco., but you will find the investment of a separate transformer well worth while. This separate transformer need have only A.C. output, eliminating the cost of a rectifier, and depending on the type of point motors in use, up to 25 volts is worth considering. Certain types of switch machine have facilities for momentary contact built in — Kumata, and Hammant & Morgan are two examples — but with say Marklin and other purely proprietary point motors, it essential to use reliable passing contact switches. Do not compromise on this, as invariably the best switch costs less than a point motor replacement.

Q.: What thickness of brass sheet would you recommend for building rolling stock and locomotive bodies? — W.C.

A.: Within reason, the thinner the better. In constructing superstructures, you are looking for neatness, and it is difficult to soft solder cleanly, when the heat is rapidly dissipated by overly thick brass stock. Shim brass suitably thin enough is very hard to obtain in Australia, about 24 gauge being about as thin as you will get, which is .022" ins thick, and usually the minimum size available is more than you economically require. Bearing brass, however, is available in thicknesses of .008" and .012", the former being quite suitable for model work, although many recognised experts prefer .005" stock. Keep in mind that although the sheet of raw material seems floppy, when formed into say a boiler barrel, the relative strength is more than adequate. By the way, even the 8 thou. material, in HO represents plate work well over half an inch thick, and this is more in keeping with armour plate, than loco. cab sides.

MAIL BAG



Sir,

The very illuminating article by B. J. Cotter in the February/March issue of the A.M.R.M. was read with great interest by me. There have been many articles printed by many model railway magazines on much the same subject, but in my humble opinion each one of such adds something new in outlook that can be utilised or modified or added to by the fan who really models.

A wealth of ideas can be noted and gloated over in the study of the photographs one sees in "The Scenic Route", for instance, or in the pictures of layouts printed in model railway magazines from overseas. Have a close look at the details on the layouts you may visit in the course of your travels amongst fellow modellers. Swap ideas on the subject of making the tinplate layout look as natural it is possible to do so. I think that the possibilities are infinite, and of never ending interest to the model railway operator who, by force of circumstances, is compelled to limit his layout, generally for lack of space.

This writer is one of them.

Making your own lineside structures, as Mr. Cotter says, is a project that is not at all difficult. Most of the buildings around small rail-stations particularly, are nearly all fairly simple in architecture and easily copied in model form and built from either cardboard or modelling

materials bought from the nearest hobby shop.

The Helper Service is another feature that I think modellers should carefully study in each issue of the magazine. Personally I have had the answers to some of my own problems answered in the Helper Service by some seeker of information having a similar or relevant problem solved therein. There times are when the close reading of the answers given by the Helper Service gives a clue to the solving of a problem that has not yet developed into a real teaser. As a comparative newcomer into the hobby, I speak with real feeling of gratitude to the chaps who, as experts, write the informative articles on many relevant aspects of the hobby in our magazine.

—JOHN MCCARTHY.

Alice Springs,
N.T.

Sir,

Peter Woolley (A.M.R.M. Feb./Mar. '65 issue) has made some very excellent points regarding standards, and I endorse what he says. I think he and others, will agree that from the point of view of the North Shore Hobby Centre, a great deal of advertising space, and counter time has been devoted to explanations of what we generally refer to as 'scale', and Helper Service has gone to some length in carefully noting the usage of this term, one that may be misleading to some devotees and certainly beginners.

A letter of mine on standards appeared about a year ago on the A.M.R.M., and from that time quite a few people have quietly worked behind the scenes on the problem in, and for Australia. The net result is adequately covered in the minutes of the last S.C.R. Executive meeting, and in short, unless S.C.R. membership has some strength, we can expect no co-operation from the Standards Association of Australia, N.M.R.A. itself, the British Standards Institute, or the British Railway Modellers' Standards Bureau. European groups, such as M.O.R.O.P. were approached as well, and as no reply was forthcoming, it may be assumed that they, too are not interested. As noted in the minutes, the file on the standards is still open — indeed Peter's letter is one more item for it — but the blunt disregard from N.M.R.A.

itself, indicates that we are just too few, for this problem to warrant attention. In the latter case, wheels from well known brands such as Tri-ang were forwarded in an attempt to force the issue.

Our total S.C.R. membership, numbering well under 300, in a total population of 11,000,000, means that well under 1% of model railway operators, feel that membership of N.M.R.A. is worthwhile, a bitterly sad reflection on our relations with railwayists.

No sensible person could reasonably suggest that an amount of £2.18.0 per year is excessive for the fellowship of N.M.R.A. alone, let alone the fundamental benefits of Data Sheets and so on, so it can only be concluded that the public image of N.M.R.A. in Australia — and perhaps elsewhere as well, when member numbers are studied — is so poor that very few will consider joining.

Even if our membership were 3,000, this would still be barely a representation of railway modellers in the continent, and I submit that short of this type of forceful active membership, we are a voice in the wilderness, and will never achieve more than direct benefit and enlightenment to a comparatively few.

Increased membership can only come by an effort on everyone's behalf; the machinery has been set up over almost 30 years of N.M.R.A. Other groups and associations have built up membership — our almost namesake in N.S.W. N.R.M.A. has proved this — and it is usually done by making known the tangible benefits. We have the tangible benefits, and yet very few are carrying out their obligations in gaining more members. Just consider what our numbers would be if we averaged just one booster member of S.C.R. per week, and yet surely this is not an excessive figure?

—RALPH THOMAS.

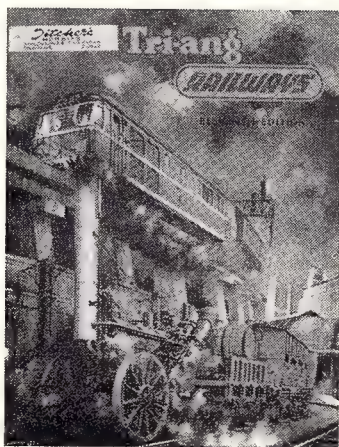
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IN NEXT ISSUE

SPECIAL LIFT-OUT

INDEX of Vol. 1

FOR READER SERVICE



TITCHERS for TRI-ANG

Send 3/- for the new Triang Eleventh edition catalogue. (Price includes post).

New Tri-ang stocks include:—

- RS70 CLOCKWORK "DOCKMASTER" SET, includes a Steam loco, 2 rolling stock, circuit of track. (Ideal for the youngster) only 49/0
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- "TRIANG THE FIRST 10 YEARS" 7/6
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CLUB CAR

To Club Officers: These pages are available for the dissemination of news about your societies. Brief news about activities will be welcome for these pages. Closing date is fifteenth of month prior to month of issue.

N.M.R.A. ACTIVITIES

New Address for President

Members of N.M.R.A. are requested to note the new address of the President:

J. M. Wheeler,
80 Carrington St.,
WAHROONGA, N.S.W.

as from May 12.

Central Division

The March meeting was held at Noel Gully's home and members inspected the new layout room which Noel has recently built. Members also admired his collection of American Railroad Photos and a copy of the A.A.R. map of American Railroads.

After some lively discussion of the correspondence from the executive committee, members settled down to general discussion of models and a portable layout.

The April meeting was at Peter Letheby's home and after the preliminaries of correspondence and other items the members discussed at great detail the use of a portable layout at an exhibition display.

Many suggestions for improvements and modifications to the existing layout were put forward, and a vote of thanks to all members who helped and gave so much of their time to the project was passed by the members.

Advance Notice of Meetings:

May 12th, R. Gilles, 96 Cremorne St., Unley; June 9th, A. Thorpe, 14 Straun Ave., Warradale Park; July 14th, W. Spraggett, 90 Narinna Ave., Cumberland Park.

OTHER CLUBS

THE AUSTRALIAN RAILWAY HISTORICAL SOCIETY. Box 74 P.O. Broadway, Sydney.

This Society was founded in Sydney in 1933 and subsequently divisions have been formed in all states except Tasmania. Total membership in Australia is over 1500 and is steadily growing. The Society is affiliated with several overseas railway organisations.

The main objectives of the Society are to provide means whereby people interested in the operation and history of railways in Australia may associate with others with similar interests to their mutual benefit and enjoyment, to encourage the compilation of authentic records, to produce publications, to arrange outings and to preserve relics.

Each division holds monthly meetings which usually feature a prepared talk, films or slides on some subject of railway interest while time is set aside for mem-

bers to meet together for exchange of information, photographs, etc.

The Society publishes monthly an illustrated, high quality magazine, the "Bulletin", containing articles of historical and current interest from all states. In addition most divisions produce a monthly news magazine covering details of current events in their state. Books and recordings are also published from time to time.

Membership is open to anyone interested in railways provided that they are 15 years of age or more. The current subscription rate is £2/2/0 per annum and includes the "Bulletin".

Please address all enquiries to the Secretary at the above address.

BLACKTOWN AND CENTRAL WEST MODEL RAILROAD CLUB. Hon. Sec., Fred Gill, 20 Turvey Rd., Blacktown.

Meetings are held every four weeks at members' homes, on a roster system. We find that interest is kept alive this way and each month a different layout is visited, so members do not become stale in their operating habits. From time to time slides, films and building projects are put on and these meetings are very well attended. We are fortunate in having a member who is keen on N.S.W. prototype rolling stock and is always snapping shots of them. He has a collection that would be hard to beat and these slides and films have been shown to model railroad clubs at Newcastle and Gosford.

Some members are in the construction stages of new layouts whilst a couple have fully operating layouts, with block control etc. All layouts are HO/OO 2-rail and most of the rolling stock equipment is interchangeable, as most members use X2F couplings. Two members have "conversion cars" which have their own type of coupling one end and X2F at the other end. This overcomes the problem of running different types of rolling stock on another member's layout.

Meetings are well attended and during summer they are held on Saturday night, whilst during winter they are held on a Saturday afternoon. The club has no membership fees or strict rules, though there are unwritten rules as regards handling other members' equipment etc.

Membership is open to anyone over 15 years of age and provided that they can hold a meeting at their home at least once a year.

Please address all enquiries to the secretary at the above address, or ring him at 622-3073.

CENTRAL COAST MODEL RAILWAY CLUB.

Secretary: L. H. Dodds, 4 Adelaide St., East Gosford, N.S.W.

This club conducted a very successful exhibition at the Woy Woy district nurse's fete in April.

In the spacious grounds of Dr. Fox's home the model train exhibition was run beneath the shade of two large willow trees and a marquee.

Most of the working models were on scale and were of American prototype and continental which was a change from the usual English models seen in coarse scale.

Two of the local members, Harry Gibson and Ron Warr, together with their sons and daughter's help contributed a lot to the success of the day's exhibit.

The secretary was able to explain many points to interested parties, some of the advantages of belonging to a model club and just what the club had accomplished in the three years of its existence.

Trains were run under the watchful

eye of Mr. Alan Hudson who is Loco changeman at Gosford, lending a real railway atmosphere to the scene.

The club intends to build a new layout in the future to give the public a change of scene when exhibiting.

The club received another invitation to exhibit at the Town Hall this coming 6 Hour Weekend.

GEELONG RAILWAY MODELLERS. Honorary

Secretary: J. Macdonald, 15 Arkana Ave., Highton, Geelong, Victoria.

At our March meeting a number of models were exhibited by various members. As there was no syllabus item listed for this night we enjoyed a 'Natter Session', whereby members were able to swap ideas and information. It proved to be a very successful evening in this respect, as members were still talking when the committee decided to pack up and go home.

At our April meeting we are to be given a talk by a member, Mr. W. Sumpston, who has just returned from an extensive world tour. It should prove to be very interesting as he has travelled extensively on railways wherever he has had the opportunity.

Our work on the club layout still progresses as steadily as ever although there is still not a lot of evidence of the work that has been put into it.

All interested persons are cordially invited to attend any meeting. Our regular meetings are held on the fourth Friday of the month at 8 p.m. at the rear of the Victorian Railways Institute in Geelong.

PASS EXCHANGE

Do you wish to exchange your passes with other modellers? If so, send your name and address with one of your passes to:

Wally G. Kennewell, Melbourne Rd., Sorrento, Victoria.

The readers listed below are willing to exchange passes.

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Athol Park, S.A.

SOUTH AIRLIE RAILWAY,

Grieger, R.C.,
20 Airlie Ave.,
Prospect, S.A.

EAST YORK PACIFIC RAILWAY,

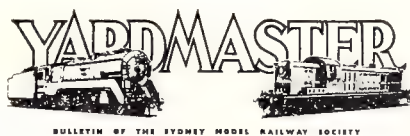
Everist, C.R.,
828 Kingston Rd.,
Apt. 412,
Toronto, Ontario, Canada.

HERON LINE,

Thornley, Ellis W.,
79 Aubreen St.,
Collaroy Plateau, N.S.W.

ARUNTA LINE,

McLeod, A.,
66 Minter St.,
Canterbury, N.S.W.



**NOTES OF THE SYDNEY MODEL
RAILWAY SOCIETY
CLUB "O" GAUGE NEWS**

Syd Lothian has on the track a rack of 4 wheel coal hoppers of the L.C.H. type. These were quite common in the days of steam and one can now see them being hauled by Syd's D57 Loco on the club layout. In the past one could always count on a coal train from the South Coast or Western Line with a string of coal hoppers with a D57 in the lead. These are the days never to be seen again except in model form such as Syd has done.

Members who have at the request of the running committee for a standard coupling have found that they are now having better running in the timetable running. This is all for the good of members although some members may not like them such as myself, it is only a matter of a screwdriver to change them from your own type to the club type. If a member wishes to bring a rack of his own rolling stock he can but he must have the club coupling on the terminal ends. An example of this is seen with 2 sets of Syd Lothian who has his own intermediate coupler of his choice, but has the club's type on the terminal ends. If Syd can do this, so can we all.

There are still no takers for the real estate at Medway. Any takers for this site for building.

Once more a reminder that your subscriptions are due. Please pay Ken Smith at the club or send it to him. Members who have not a full year are asked to see Ken as to what they have to pay. City members £2 and country members 16/-. Remember you have only till June to pay.

HO ACTIVITIES

Maxwell Burke turned up for the New Year opening of the HO layout with quite a string of goods rolling stock. What took our eyes was the string of hopper waggons, 8 bogie and 7 four wheelers. The bogie waggons were of Erie Railroad type and the four wheelers were of N.S.W.G.R.'s L.C.H. type. Three were made from Trix's frames and four were made from Peco frames. They are all painted black.

Arthur Wheatley had a lovely set of four wheel coal hoppers seen around the Newcastle coalfields area and they were hauled by his model of a standard freight loco No. 5362, N.S.W.G.R.'s T.F. class.

Frank Shennen came in with a new diesel to show us, being a model of a low profile hood type S.D. 24 built by Tenshodo and was painted Tuscan Red, with black under frame. Also a 0-8-0 heavy switcher which took our eyes because of the full detail on it. This model also built by Tenshodo from Rock Island prototype.

Lee Gallaway placed on the HO layout tracks a 4+4 articulated tank loco which was painted with a silver smoke box, funnel and body olive green with red cab roof, prototype not known, but would be used on a logging railroad vintage around 1900. He also had a 2-6-0 mogul painted blue, tender with gold bands, cab black and boiler blue with the funnel and smoke box black. The sand and steam domes brass.

Prototype early Japan and altered to look like early American. All self painted. It is very pleasing to see some old time locos and rolling stock on the layout.

After a year's absence Len Jansen came in to see us and tried his hand at goods (Central) yard and brought to light a beaut 4-6-2 with a fantastic lot of detail. A model of the Southern Railway in America built by United of Japan. It ran very smoothly and is a nice addition to your loco roster Len. It was nice seeing you again. Hope your wife is now fit and well again.

IN NEXT ISSUE

**SPECIAL LIFT-OUT
INDEX OF Vol. 1
FOR READER SERVICE**

Sentinel super detail components, including parts for MHG van.

Hammant & Morgan electrical gear, and full repair service for power packs, controllers etc.

PMG disposals equipment. Key switches, relays. Hook-up wire, terminal tabs. Knurled nuts.

Full range of B.A. and some metric screws. B.A. taps & dies.

Coupler exchange service. Tri-ang Mark III available with screws for fitting to Dublo, Fleischmann etc.

Scribed wood sheets. 4, 6, 8, 10, 12", in planking. Cor. iron and fibro in HO. Sq. sections in 4, 6, 8, 10, 12".

Franklen fencing and tie base. Picket fence for HO 3/6 yd. Excellent. Brass ladder 11d. per 4".

Conversions from two rail to three rail. Tri-ang Brush for H. Dublo 38/-. Connie 25/-. Britannia 36/6. Jinty 28/-. Includes one Tri-ang Mark III coupler.

Conversions to two rail (Marklin & H/D 3 rail) to two rail DC, also to NMRA Standards if required with X2f or Kadec MKD couplers.

Chain 29 links per inch for wagon loads, 4/2 per foot. Also heavier for logging etc.

Airfix 2-10-0 and Rocket in stock. 0-6-0 saddle tank will suit Tri-ang 0-6-0 chassis, 7/9.

Tri-ang logging car 30/- Corgi & Dinky spare tyres for freight loads, 3/6.

North Western Models kit range always in stock from 14/9, now strongly boxed.

N.M.R.A. standard gauge in stock 14/- ea. Need a spare?

Humbrol spray paint in pressure cans. Semi-matt is particularly good for locos. 9/6 per can.

Superquick full range including building papers which are to OO/HO scale (not like others we know).

Repair service for all brands, most parts on hand, but can make up when required.

Mail order, promptest in the country, and we do reply to your letters!

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Then again, my grandchildren could probably finish off the layout — if they're lucky.



SOUTHERN CROSS REGION Envelopes Available For Members

Members of the Southern Cross Region of the National Model Railroad Association may now purchase envelopes bearing the imprint illustrated above for their own personal use.

Envelope size is 3½" x 5½". Prices including packaging and postage are as follows:

25	2/6
50	5/-
100	9/-

Address orders, including money orders, postal notes or cheques (stamps are not accepted) made payable to "S.C.R. of N.M.R.A.", to

Stationery Supplies
C/- Membership Chairman
Mr. F. A. Maxwell,
11 Dempsey Street,
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THE MARKET PLACE

12 words for 2/6. Extra words 2d. ea.
Name and address free. Cash with copy.
No charge to N.M.R.A. members. Closing
date: 15th of preceding month (e.g. 15th
July for August issue).

FOR SALE

TRI-ANG: R339, R422, R423, R424, R425, R625, R328, R210, R15, R10, R18, R136, Faller Viaduct (B545). G. C. Tindall, Victoria Park, Darling St., Dubbo, N.S.W.

STEAM LOCOMOTIVES, Detail Blue Prints and Castings, all gauges O to 15 in. Outline Blue Prints 7 m/m scale Locos and Rolling Stock, past and present. Double Deck Car. Tram Cars. Authentic Plans famous Ships. Marine Engines, etc. Bolton, 70-72 King Street, Sydney. Catalogue 7/-.

FLEET Products new; most items; Bogies, 38 wheels smokebox fronts, at list prices. Bond's cast iron wheels; Motors; Rectifiers S.A.E. — Tack 350 Homer St., Earlwood, N.S.W. Phone: 55-4642.

WANTED

LIONEL, Flyer, Standard, O Gauge trains to 1941. Lionel 6440 pass. cars 1949, reasonable condition but locos need not operate. All letters answered. Write R. Watson, 1 Summit Ave., Mooroolbark, Vic. Phone 723-1928.

COPIES of the Model Railway Constructor April through September 1964. A4232 Cpl. Raddatz. E.F., Tech. Flight, No. 1 Air Trials Unit, R.A.A.F., Woomera, South Australia.

AUSTRALASIAN MODEL RAILROAD MAGAZINE

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for all your Hobby requirements

The Locomotives of the Emu Bay Railway

The Emu Bay Railway is a 3'6" gauge privately owned line which operates between Burnie on the Tasmanian North Coast and Zeehan approximately ninety (90) miles south.

The locomotives "Murchison" and "Heemskirk" were built by Dubs & Co., of Glasgow in 1900.

In 1961 both were converted to burn oil fuel, provided with deflectors and painted in a two-tone blue colour scheme. They are used to haul "The West Coaster", a train of three cars which is painted in a similar colour scheme and intended for tourist traffic.

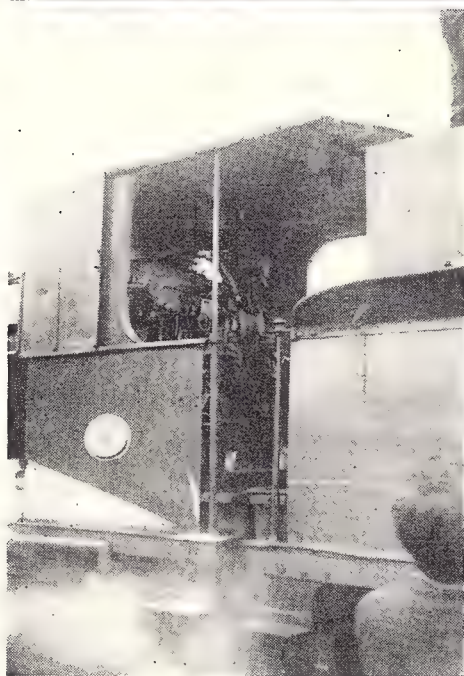
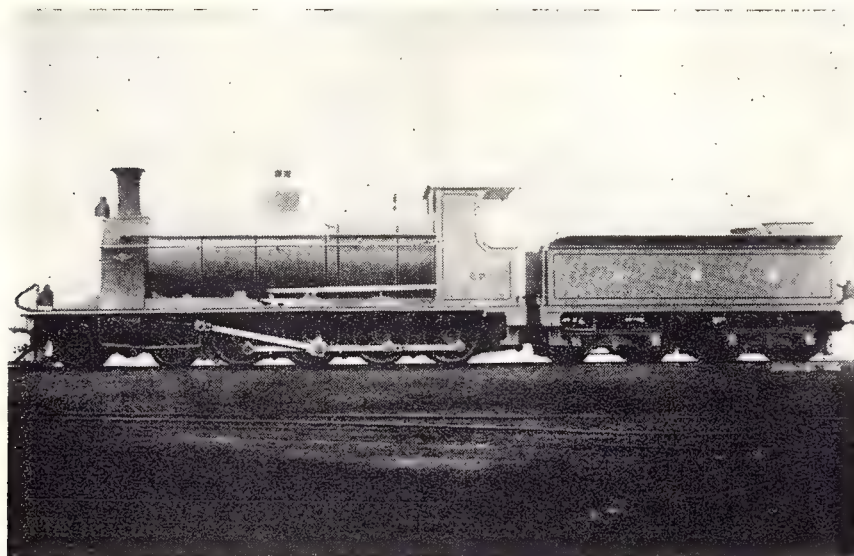
The top photo shows how the locomotives appeared when first delivered.

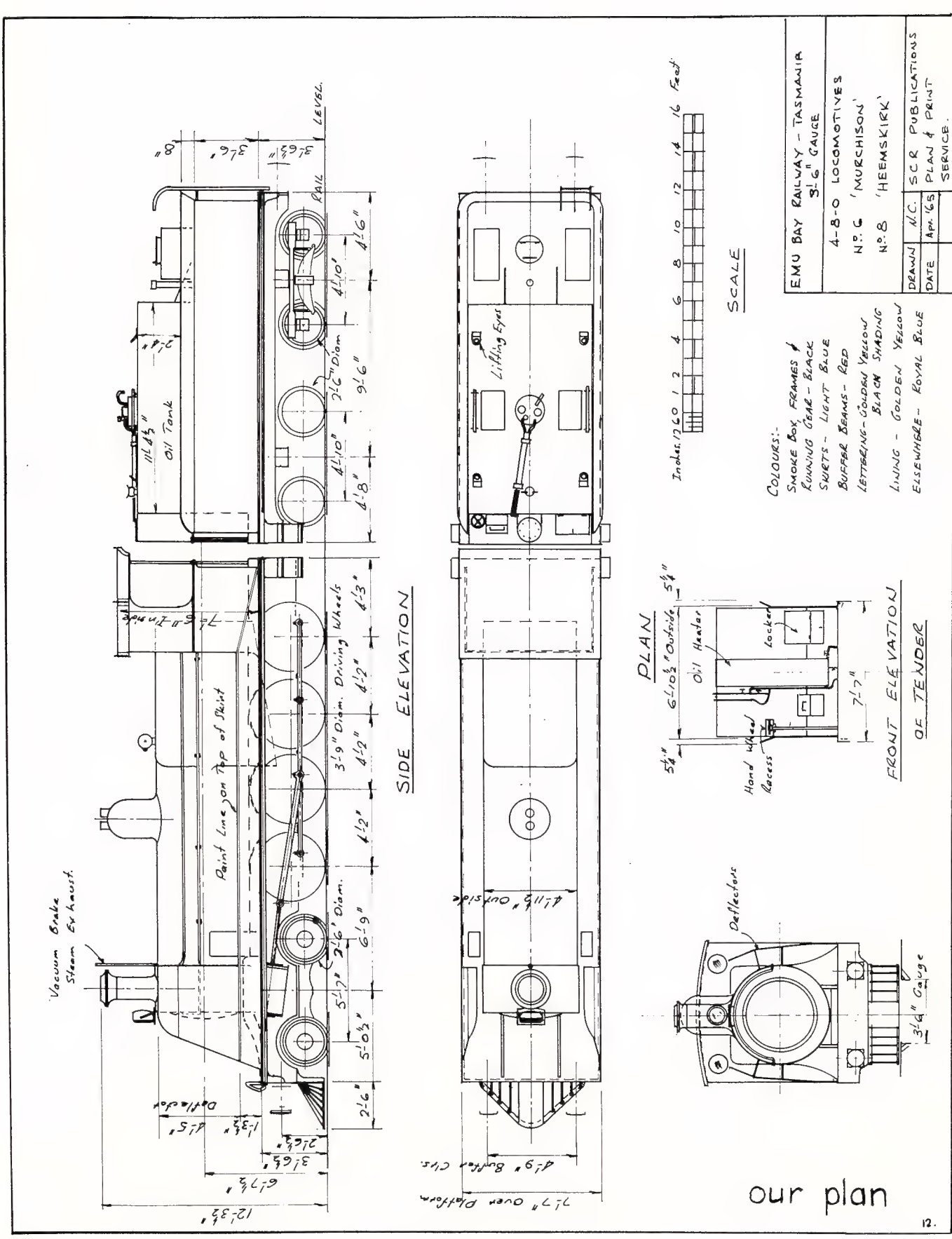
The second photo gives a good view of the cab with its interior detail, whilst the third will enable any modellers to see the fittings on the front end.

Fourth photo shows the construction of the tender.

The oblique view shown in photo five shows how the deflectors are painted dark blue and the skirt in the lighter blue.

S.C.R. Publications Plan and Print Service is indebted to Philip G. Graham, Burnie, Tasmania, for the original builders' drawings and the photographs.





SYDNEY MODEL RAILROAD SUPPLIES

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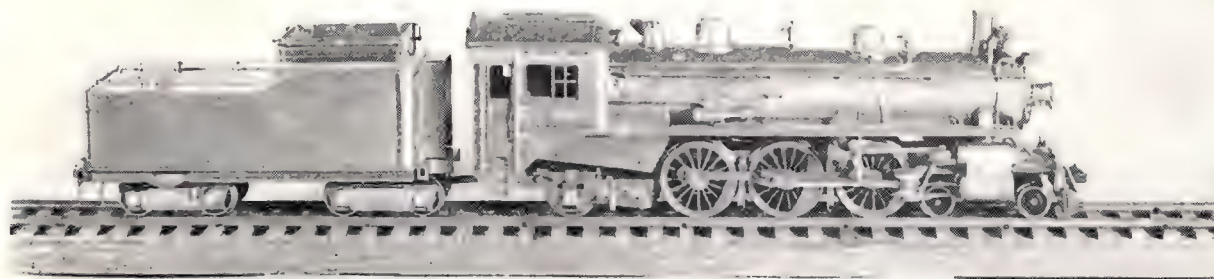
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EASTER SPECIALS



Box Cab Electric Penn. or G.N.

powered by two heavy duty motors, all brass construction were £33-15-0 now only £20-0-0.



Our other special of the month, the Canadian Pacific 4-6-2. This beautiful model has all sprung drivers and is powered by a heavy duty K.T.M. motor, was £29-15-0 now at the sale price of £20-0-0. This offer expires on the 31st of May and will not be repeated.

Other Models that are available

S.P. AC-9 2-8-8-4, VGN. 2-6-6-6 Articulateds £84-0-0 each. C&O Class J2 4-8-2 Mountain £49-10-0, C&O 4-6-4 £39-15-0 N.P. 2-8-0 £29-15-0, B&O P-7 4-6-2 £29-15-0, U.S.R.A. 0-8-0 **Available in May from United.** USRA light 2-8-2 £36-11-3 C&O Class "H" 2-6-6-2 £58-10-0, ATSF 4-6-4 Hudson £35-0-0 S.P. 4-6-0 HON3, ATSF 2-8-0 £29-5-0, S.P. 4-6-2 P-5 £33-0-0 D&RGW "K" 27 HON3 2-8-2, D&RGW "K" 28 HON3 2-8-2 £43-17-6 H.O. Standard Passenger car set less trucks £33-0-0. These models are in small quantities, so order your choice now and avoid disappointment.

THE MAGAZINE DESIGNED FOR ALL RAILROAD HOBBYISTS



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MODEL RAILROAD

MAGAZINE

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Incorporating "THE BOOSTER"

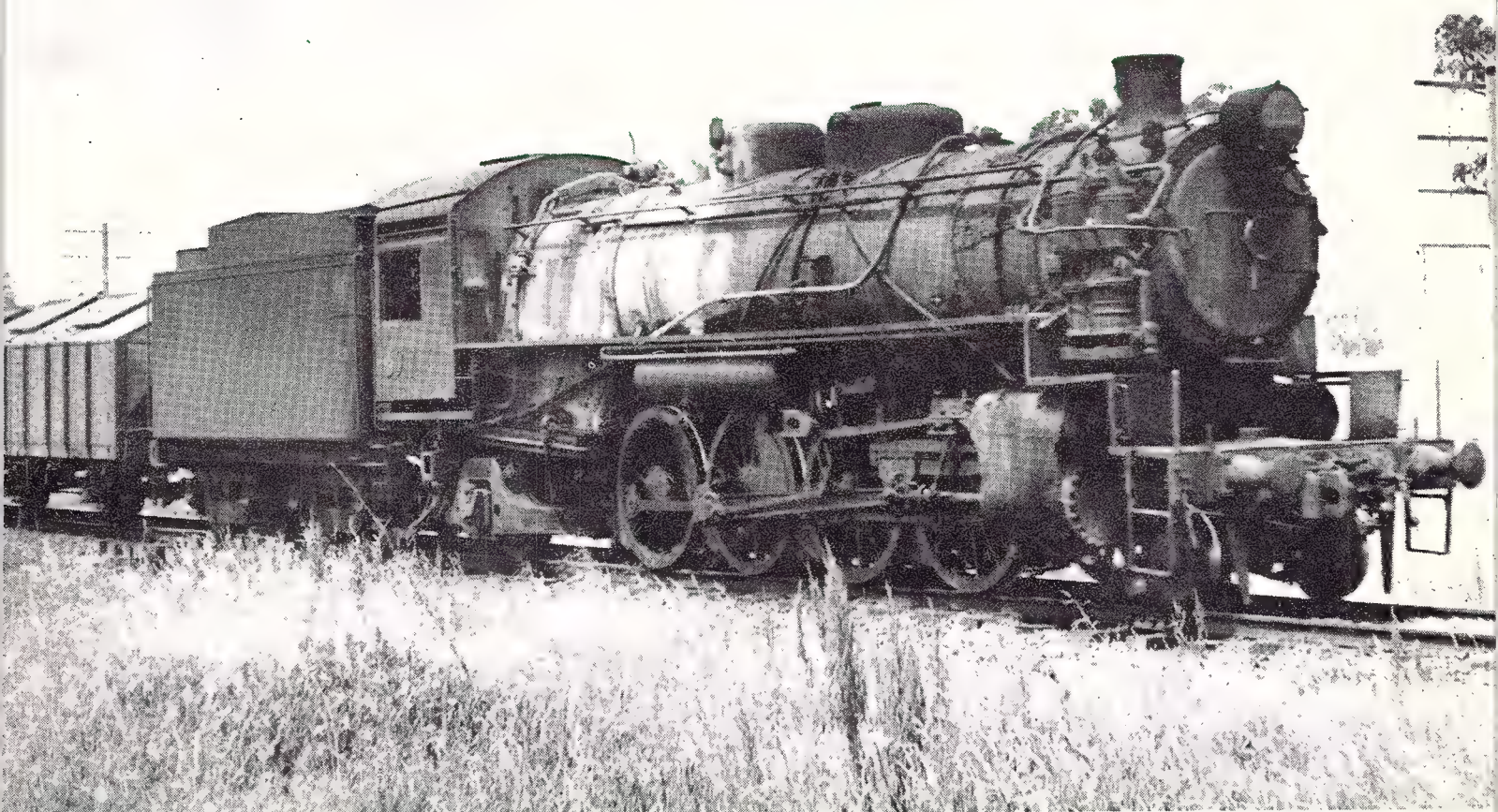
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JUNE/JULY, 1965

Vol. 2, No. 14

10/- p.a. to Members of S.C.R.
of N.M.R.A.



In this issue:

- SPECIAL LIFT-OUT INDEX FOR VOLUME 1
- LEARN FROM THE PROTOTYPE
- WAGON LOADS
- BRIDGE OVER THE RIVER KWAI

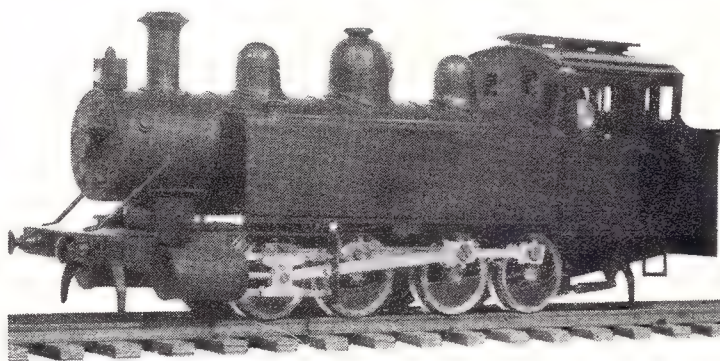
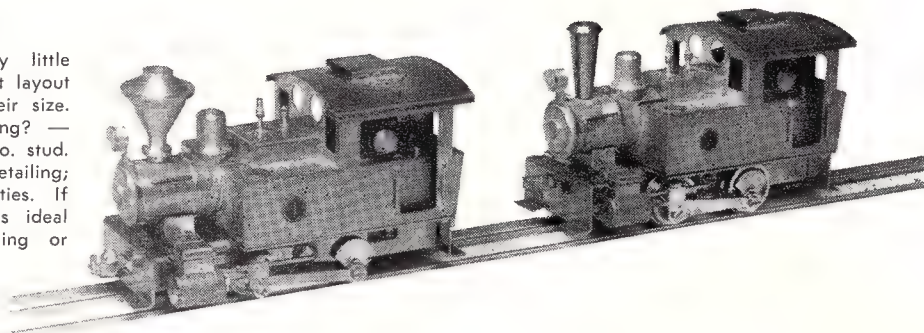
TANK LOCOMOTIVES ... AGAIN BY POPULAR DEMAND! ...

THE PLANTATION TANK LOCO. IN HO AND HOn3:

Economical and reliable, these sturdy little work-horses are at home on the smallest layout and yet have astounding power for their size. Just commencing scale model railroading? — Here is an inexpensive start to your loco. stud. Perhaps you like rebuilding or superdetailing; these models offer unending possibilities. If you own a larger layout then here is ideal motive power for that industrial siding or logging branch-line.

Every modeller can use a 'Plantation Tank' either in narrow or standard gauge.

Price: HO, £4-17-6, HOn3, £4-18-6.



BALDWIN 0-8-0 TANK LOCO IN HO:

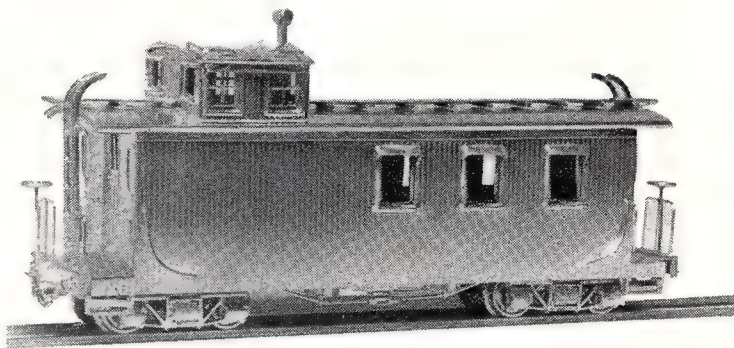
The familiar outlines of Baldwin side-tankers have graced most logging and branch-lines during the past 75 years and here is the opportunity to include such a loco. on your pike. The 0-8-0 wheel arrangement promises powerful haulage, yet the short wheelbase can be accommodated on the sharpest curves. Of familiar all-brass construction, the model is nicely finished with a pleasing black paint job and a smooth running mechanism capable of scale short-line speeds. Already well detailed, it offers many exciting possibilities for the super detail fan and old-time enthusiast — at a price you can afford. Just £11-10-0.

AND A TREAT FOR FANS OF THE NARROW METALS AN HOn3 CABOOSE! ...

D. & R. G. W. HOn3 CABOOSE:

A caboose is an indispensable part of every freight train and as such is always under notice. Only a quality model can give complete satisfaction and Kumata's model is of the highest possible standard, incorporating all the features of the D. & R.G.W. prototype and capturing the inherent atmosphere of the slim gauge lines.

Of sturdy brass construction, finish includes finely detailed coupler pockets, air hoses, truss-rodging, grab-irons, cupola window shades and beautifully scribed sides and ends. A collector's model at a popular price. Only £4-19-6.



For Australia's Largest Model Railway Range! ...

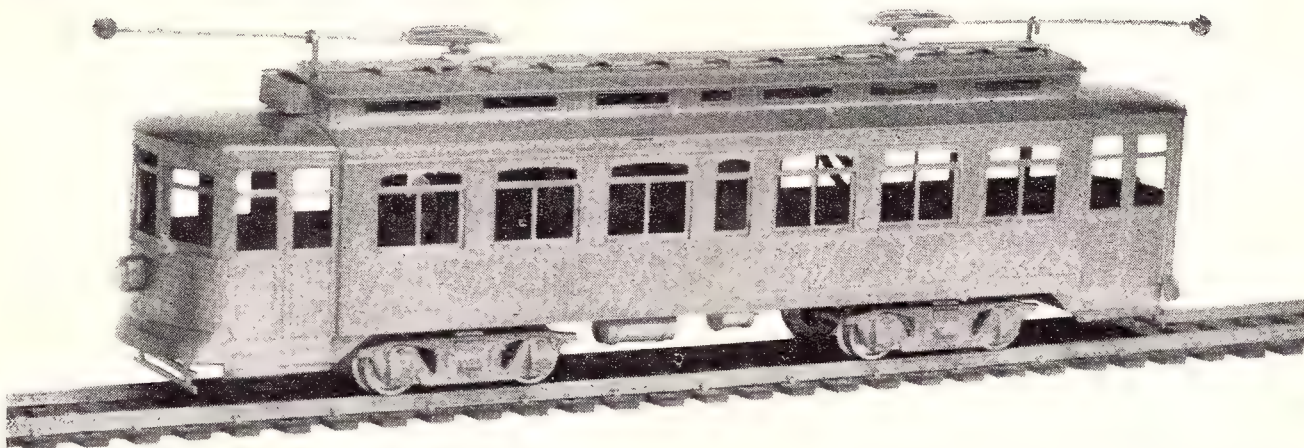
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NEW! ELECTRIC CAR FOR CITY SERVICE...



ST. LOUIS PALACE CAR. A vestibuled Double Truck Saloon Car, suitable for city and suburban service. Of finest brass construction, this Car features etched sides, fully decked roof, drop hammered truck frames etc. HO scale to N.M.R.A. standards. Unpainted, ready-to-run 63" over bumpers. Price: £12-10-0.

Other News from 'THE DOCKYARD'...

Our final stocks of Peco Streamline Points (SL-98X/SL-99X) are to hand at the old price of 26/3. After these are sold out, future indents must sell at 32/6. So this is your last chance!... From Tenshodo are supplies of G.N. 4-8-4 S-1 'North' Locomotive, R.I. 0-8-0 Switcher, S.F. 4-6-4 Hudson Loco., G.N. 2-10-2 'Q-1' Loco. and Burlington SD-24 Diesel Switcher. Also a host of accessory replenishments, including Standard Passenger Truck Sets, grain of wheat lamps, geared truck sets, etc...

From Sakura is the new F.D. Diesel Switcher at £5-15-0, whilst United have delivered our first stocks of the fine new C. & O. Class "H" 2-6-6-2 Locomotive at £53-10-0 and the HO n3 Rio Grande 'K-28' 2-8-2 Loco. at £40-10-0...

Good news for those awaiting more of our popular D.P.D.T., Centre-off, Toggle! Further supplies are now available at the same price of 9/6. Other toggles in stock are D.P.D.T. at 7/6, S.P.D.T., Centre-off, at 6/- and S.P.S.T. at 4/-...

Pittman motors are again in good supply with the arrival of fresh stocks from the U.S.A. The full range and prices relevant are as follows: DC65A at 69/-; DC70 at 55/-; DC85A at 62/- and DC105A at 121/3. Although temporarily discontinued, we hold stocks of DC62B at 49/-; DC81 at 59/6 and DC91 at 88/-.

Similarly, although discontinued altogether, limited stocks still remain of DC60 at 51/9 and DC71B at 69/- DC703, the special Motor & Gear Box for converting Athearn belt drive diesels, although discontinued and out of stock, is presently being made up for 'Dockyard' in a limited run. Delivery will be advised shortly...

New recordings in stock comprise:

'Twilight of Steam' (with book) at £6.15.0; 'Hear that Whistle Blow' at 66/6; 'Sunday Only' at 66/6 and 'Ghost Train' at 66/6. 'Valley of Steam Locomotives', an album, is also to hand at 94/-...

Full stocks of our Floquil range of railway paints are again available, whilst Walthers have delivered 'DDV' Decal Flat Finish at 9/6 per bottle and Solvaset at 9/6 per bottle, in addition to rolling stock kits comprising: HO No. 7859 80' Dormitory Lounge Car at 67/6, HO No. 7853 75' Combine Car at 62/6, HO No. 7860 Diner at 70/9 and O No. 5401 Covered Hopper Kit, with U.P. decals at £7-7-6...

Some months ago we announced further special production for 'Dockyard' of additional 'O' gauge driver sizes, both spoked and Box-pok, insulated and to N.M.R.A. Standards. These wheels are now to hand, expanding our stocks to the following range of brass driver sets: 22, 24, 27, 32 and 40mm. sizes at 18/6, 18/6, 20/-, 22/- and 25/- per pair, respectively. 32 and 40mm. sizes are available either in Spoked or Box-pok pattern, equipped either with small or large balance weights. The remaining sizes in Spoked pattern only, with small balance weights. 11 varieties in all...

Handy 100 ft. coils of Nickel Silver and Phosphor Bronze Wire are now available, especially packed flat for model purposes in glassine bags. Gauge sizes are 22, 24, 26, 28 and 30. Prices, per Nickel Silver Coil, being 34/-, 31/-, 23/-, 20/- and 17/- each, respectively, whilst for Phosphor Bronze Coils, the prices are 36/-, 30/-, 21/-, 18/- and 15/- each, respectively...

Augmenting already large stocks, a new shipment from Athearn comprises of the following kits: No. 1753, B. & O. Hop-

per Car, 18/9; No. 1779, U.P. Stock Car, 18/9; No. 1778, M.P. Stock Car, 18/9; No. 1865, B. & O. Pullman Car, 33/6; No. 1871, S.F. Observation Car, 36/9; No. 1875, B. & O. Observation Car, 36/9; No. 2171 S.F. Budd RDC (Coach) Rail-car, £4-19-0; No. 2176, S.F. Budd RDC (Combine) Rail-car, £4-19-0; No. 1700, U.P. 200 ton Crane, 33/6; No. 1405 S.F. 50' Flat Car w/2 Vans, 27/3; No. 1254 C.B. & Q. Caboose, 23/9; No. 1250, S.F. Caboose, 23/9; No. 1255, B. & O. Caboose, 23/9; No. 1252, U.P. Caboose, 23/9; No. 1154 U.P. GP 9 Diesel Loco with HiFi Drive, 99/-; No. 1152 B. & O. GP 9 Diesel Loco with HiFi Drive, 99/-; No. 1230, C. of G. Special Box Car, 21/3; No. 1228, Monon Special Box Car, 21/3; No. 1205, S.P. Box Car, 18/9; No. 1352 RDG. Flat Car 40', 23/6; No. 1350, P.R.R. Flat Car 40', 23/6; No. 1400 S.F. Flat Car 50', 23/6; No. 1401 Milwaukee Flat Car 50', 23/6; No. 1500 Shell Tank Car, 23/9; No. 1600, Swift Refrigerator Car, 23/6 and No. 1475 Pickle Car w/Tanks, 21/3...

By the time this appears in print, 'United' will have delivered more V. & T. 4-4-0 "RENO" at £21 and the new P.R.R. 'L-1' 2-8-2 Mikado at £33-15-0. A following shipment will include further stocks of U.P. 2-8-0 at £30 and S.F. 2-8-0 at £26-10-0.

STOP PRESS

A late cable from Japan promises dispatch of the following new models by the end of June: HO 1921 Brill/Mack Rail Motor at £7-19-6; HO n3 Steam Tram Motor at £7-12-6; HO n3 Log Car at 35/6; HO Single Truck Sprinkler Car at £8-19-6; HO Toronto Double Truck Peter Witt Car at £12-15-0; HO New Orleans Double Truck Saloon Car at £10-19-6 and HO North Shore 4 Car 'Electroliner' at £33-19-6. Watch for further details!

YOU SHOULD BE A MEMBER OF N.M.R.A!

*The Southern Cross Region of the
National Model Railroad Association*



Offers You ...

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THE A.M.R.M.—Bi-monthly the S.C.R. sends you the "National Model Railroad Magazine", which is the Region's own publication, 20-30 pages, giving you news of Australian and New Zealand Model Railways, articles and the doings of the Australian and New Zealand Railways — plans, how-to-do-it type articles every modeller appreciates — Shop Detective — Photo Section — and other allied information.

PROTECTION—is provided you in guiding your purchases of model railroading equipment by the N.M.R.A.'s CONFORMANCE COMMITTEE, which checks the products found on your dealer's shelves for conformance to the OFFICIAL N.M.R.A. STANDARDS and reports its findings in the BULLETIN from time to time.

ECONOMY—All this material is provided ALL members, regardless of the class of membership, because most of the work of the N.M.R.A. is done by volunteers; members just like you, who give up part of their hobby time to work on committees for the betterment of the hobby in general.

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THE AUSTRALASIAN MODEL RAILROAD MAGAZINE

Vol. 2, No. 14, JUNE/JULY, 1965

Incorporating **THE BOOSTER**

THE OFFICIAL JOURNAL OF THE SOUTHERN CROSS REGION OF N.M.R.A.
Also THE YARDMASTER, The Bulletin of the Sydney Model Railway Society.

AUSTRALIA'S LEADING MODEL RAILROAD MAGAZINE

CONTENTS

MAINTENANCE, by Les Street	Page 10
LEARN FROM THE PROTOTYPE, by Jack Parker	11
SIMPLE TRANSISTOR THROTTLE, by Terence Carpenter	12
PAINT! WITH A POLISH, by Jeff Barclay	13
WAGON LOADS, by Les Street	16
WHAT'S WATTS, by Roger Henry	17
AN EYE FOR DETAIL, by Les Street	20
BRIDGE OVER THE RIVER KWAI	21

REGULAR FEATURES:

On the Cover	5
Shop Window	6
Shop Detective	8
The Scenic Route	14-15
Hints	18
Helper Service	22
Mail Bag	24
Club Car	25
The Market Place	26
Our Plan	27

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Editorial...

It had to happen some time! It is very gratifying to find that we have a larger number of readers than we at first supposed. As you will see if you peruse our Mailbag column quite a few readers have gently chided us for several mistakes which we have made in the last issue. We cannot get away with our mistakes, as someone has suggested, by pretending that they were done on purpose to attract comments from our readers. Actually, editing of this magazine is only a part time occupation and when material for an edition arrives late and is rushed through the linotypers and is not proof read something is bound to go wrong somewhere. And it sure did! At least we didn't have much trouble

filling the Mailbag page this issue. Perhaps these correspondents might like to turn their hands next month at contributing articles for this publication and help to fend off the ever growing threat of insufficient material to fill our pages.

Enough for the lighter side of publishing. We have just received the sad news that Mixed Goods has ceased publication with its recent last issue. Carried on for seven years by two stalwart railway modelers, Gus Durham and Ted O'Halloran, this monthly publication which has always carried an amazing variety of model and prototype news, articles and plans, has always been a popular production with a large circle of railway enthusiasts.

As its catchline declared, it was "published by enthusiasts for enthusiasts". Every reader will regret its passing.

SUBSCRIPTION EXPIRED?

You will find that your expiry date is included with your name and address on the magazine envelope. Check now and renew in plenty of time.

On the Cover...

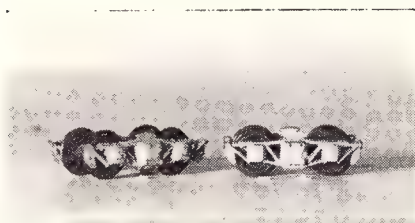
Chris Pratten, a frequent contributor to our pages, secured this excellent photograph of a 59 class 2-8-2 Mikado passing near his home at Borenore, N.S.W. Steam is still seen frequently in this part of the country.



HO & HOn3 Logging Trucks

Manufactured by: Kemtron Product Coy.—
U.S.A.

Price: £2-10-0 per pair.



The side frames are well detailed lost wax castings with brass cross strap. Trucks are rigid non equalising type with steel needle point axles and black oxidised turned brass wheels 26 inch diameter.

The wheel sets roll freely, are concentric and in gauge. Cast on brake shoes complete this fine prototype log truck. Wheelbase is 5'0".

Vintage Tourer Car

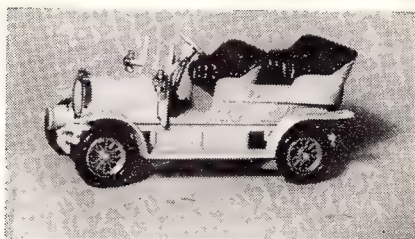
Manufactured by: Lesneys—United Kingdom.
Price: 6/11 each.

This model is one of a very wide range of motor vehicles made by this Company.

The particular model reviewed comes from the Models of Yesteryear Series, and is a 1904 Spyker, and as outlined on the carton was the model car used as the opposition to the Darracq "Genevieve" in the film of the same name.

There is lots more detail on the packet and as stated the scale is 45:1 which makes the model suitable for O gauge users.

The paint scheme is yellow with green upholstery and brass fittings. Overall length is 13'2", width 5'9", overall height 5'8", all dimensions are to 1/4 inch scale.



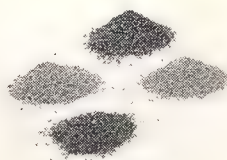
Fine Scenic Gravels and Ballast

Manufactured by: Kemtron Product Coy.—
U.S.A.

Price: 10/- per bag.

There are seven variations in this range of super fine material. They can be used for a very wide number of purposes from ballasting track to gravel road and paths.

This material would be the finest in texture that I've seen and would satisfy the most avid scale addict.



The colours available are black, light grey, green, tan, buff, gold and orange. It is difficult to tell just what the base material is, but it looks and feels like fine sand. It takes glue without trouble and the finished job looks very realistic. The product is fairly expensive but it goes a long way and is well worth the cost in close up locations where effect is paramount.

OO Train Set

Manufactured by: Rovex Scale Models Ltd.—
United Kingdom.

Price: £8-10-0.



This would be the first time a manufacturer has attempted to present a loco which has been grimed up. The loco is called "Old Smokey" and the set consists of 0-6-0 Locomotive and tender, plus Coach and twelve door Utility Van, an oval of Super 4 Track, Crew Member, and automatic uncoupling ramp. The loco is fitted with synchro smoke unit which gives up to twelve minutes of continuous smoke. Full instructions for operation, hook-up and maintenance are included in set.

The set does not include power pack or controller.

This is only one of many sets by this manufacturer, but unfortunately the loco is not as yet available on its own. I would say that this set would be most suitable for the young beginner to commence building on. There is a very wide range of accessories for the improvement and enlargement of the set.

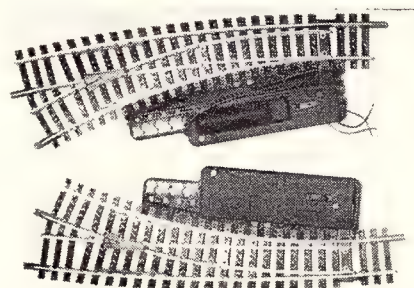
Curved Turnouts

Manufactured by: Fleischmann HO International—West Germany.

Price: Remote Control 88/- pair; Manual 59/6 pair.

These turnouts are particularly useful in tight layouts as it is not really satisfactory to place normal turnouts in curved track. This type of turnout is not available in this country as a scale assembly. The only way is to build your own.

The Fleischmann unit is assembled with simulated wood-grained moulded plastic base with brass rail. The rail section is a little oversize compared with N.M.R.A. RP15 recommendations. The rail height is approximately eight thou. oversize, rail head width is O.K. at 0.045 inch, and base width is 0.082 inch, six thou. under-size. In other words, a few rubs of a file will fix the height variation, the other will not worry you one little bit.



The circuit is of the non-route isolating type, in other words all tracks are alive irrespective of which way the points are set. Incorporated in the turnout operating mechanism is a DPDT switch fed with DC current from the outer running rails.

By following the well illustrated instruction book issued with each pack it is possible to make use of the following refinements. Train control by route isolation, Interlocking signalling, Tell-tale Lights at control panel and reverse loop automatic control.

All told these turnouts are good quality, well made and smooth in operation, they gauge correctly but the flangeways are too wide but operate O.K. The turnouts are packed two to a box, one of each hand. It is possible to purchase conversion kits to easily convert manual turnouts to electric operation.

BACK NUMBERS

of this magazine are available at 2/6 each. Available are Nos. 2, 3, 5 thru 13 Add 5d postage for first copy, then 3d per copy thereafter. Make Postal notes payable to SCR Publications, Earlwood.



HO Figures

Manufactured by: Rovex Scale Model Ltd.—
United Kingdom.

Price: 7/6 per set of 6.

There are a total of thirty-six figures in this series. They are made up in sets of six.

They are grouped as follows — Pedestrians, Workmen, Children, Urban, Industrial Workers and Road Workmen.

The figures are well moulded in plastic, realistically painted and as are most figures available, mounted on an ugly circular base which can easily be removed with the aid of a sharp razor blade, then glue the figures in place using pliobond or similar cement.

One good feature is that the figures are a normal 6'6" high, none of these midget undersize 5'6" to 6'0" types often put forward as normal.

BINDING VOLUME ONE

For those who want to keep their Australasian Model Railroad Magazine in perfect condition we have arranged a binding service for readers.

Volume One is completed with issue No. 11. An index for this volume is included in issue No. 14 for June/July, 1965.

Send the index together with your first 11 issues to:

Binding Department,

A.M.R.M.

189 Homer Street,

EARLWOOD, N.S.W.

together with cheque, postal note or money order for 35/-, payable to "SCR Publications," Earlwood. Pack your magazines strongly to avoid damage in the mails.

The binding contractors will only accept delivery of orders from us in lots of 25 volumes or more, so there may be some delay whilst we collect lots together. The sooner you send your order the sooner your volume will be returned. We pay return postage.

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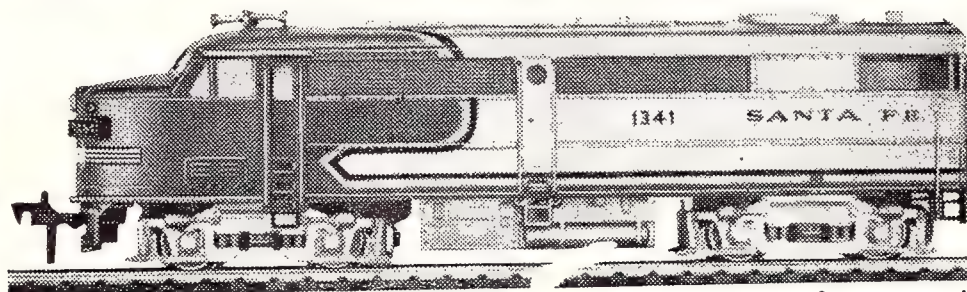
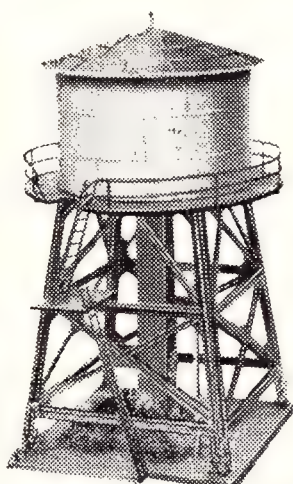


HO Scale Model Railroad Accessories.

SANTA FE
Alco Diesel
Electric Loco



MODEL TRAINS



Precision engineered with superb power and excellent detail.

Naturally it is Fleischmann.

Available all good Hobby Shops.

The world's finest range of super scale models of Continental and American locomotives, rolling stock, track and accessories.

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PECO



You do not of course need to twist or screw track into the shape illustrated, but it does show just how strong and flexible PECO-Streamline really is!

A complete trackage system in HO/OO Gauge with a prototype realism and a precision engineered finish to delight the eye and bring joy to the heart of every Railway Modeller. Universal in application, it accepts wheels of every known make except Trix Coarse Scale. The

PECO "Streamline" system is complete in every way; track, points, crossings, metal and insulated rail joiners, foam ballast underlay, point motors, switches and anything else that hasn't been mentioned.

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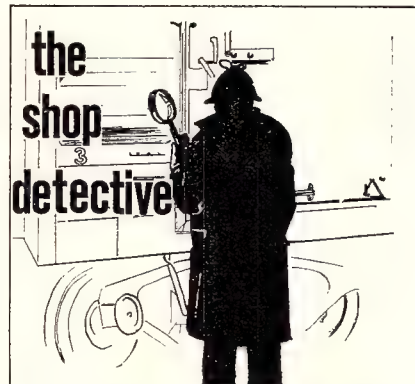
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Dockyard tells me that their 'Rock Island' 0-8-0 switcher has excellent slow speed characteristics. HO gauge. Dockyard also has a good range of Tenshodo and Custom (Olympia) signals, and a choice of 9 Suydam structural kits.

Advance information from Dockyard:— By the time that you are reading this column, the famous 'Puffing Billy' should be available in HO, super detailed. For obvious reasons the gauge will be 3 feet instead of the prototypical 2'6".

Hearn's Hobbies of Flinders St., across from Elizabeth St., in the Railway building, will supply most Tyco items on 24 hours notice.

Vincent's Railways of 93 Station St., Fairfield, Tel.: 48 7503, has a nice range of Merten figures in HO. Also Vollmer and Kibri structure kits. The Vollmer 3-stall roundhouse could be just what you are looking for, and to supply the ballast for your right of way there is the Vollmer operating stone crusher. Truscale Lichen is available at Vincent's.

Advance information from Vincent's:— AHM Berkshire, 2-8-4 and Athearn's new kits (RP25 wheelsets) due in August. Also expected at the same time is the new AHM rolling stock at special prices as advertised in the February and March M.R. Maybe the N. & W. Y' 6b' in HO by AHM will arrive also.

NEXT

MEETING?

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MAINTENANCE

by LES STREET

Just think how many layouts you have seen. Now deduct from the list the not-so-good ones and you've a smaller number of top class ones left. Now, what made you classify these in the top grade? Track-work good? — yes; plenty of detail? — yes; nice buildings? — yes; smooth running and well kept look? ah, now you've hit it! The builder spent a proportion of his time on regular maintenance and as a result his layout **WORKS**, and works well! Now, do YOU do the same, regularly I mean? We-I-I-I, perhaps not, eh?

Regular maintenance of a layout is as important as the basic construction work, but so very rarely gets the same attention from layout owners, so here are a few tips. Check off the list — if you do more than 50% I'll be surprised, and you'll be surprised at the difference regular maintenance makes to your layout.

(1) DUST: Without doubt this is the biggest problem and thus merits your close attention. Brushing isn't much good for it only shifts the muck from one place to another. Use a vacuum cleaner with a brush tip or a piece of stocking over the suction hose, according to the demands of the situation. The stocking will stop that model blonde zooming up the spout and into the cleaner, too! Structures, bridges, etc., can of course be done only with fine brushes and later the loosened dust is vacuumed up, *carefully*.

After the vacuuming is complete, the trees, bushes and plaster work will still look grubby because the dust is ingrained into the pores of the material and won't come away. What to do? Well, for plaster, (assuming oil colour washes were used) try brushing on a thin coat of *pure* turps — this will brighten up the scenery quickly and easily. For trees and bushes — if you've been wise you will have "cured" your natural foliage in the first place with a mixture of glycerine (1 part) and water (3 parts). Accordingly, when spring cleaning your layout, give each tree or bush a squirt of the "medicine" using an atomiser or similar spray apparatus. This brings them back to life again.

(2) TRACK: Perhaps the most important step of all and probably the most neglected. Most owners clean the rail heads at intervals (usually when the locos won't run) and check gauge, switches, etc., when derailments occur, but what about **PREVENTIVE** maintenance instead of the **CURATIVE** variety?

(a) Check gauge, check rail clearance, switch alignment and loose spikes regularly, particularly when the temperature ranges widely.

(b) Clean dirt, ballast, oil, gum and grease out of switch rails, checkrails, and particularly between blades and running rails.

(c) Check feeder connections and have a general look at your wiring connections — you may have been in a bit of a hurry when you soldered up those last few and this may be about to cause you trouble!

(d) Clean rail regularly — it's surprising just how dirty they can become in such a short time.

(e) If you have never had the time to solder on bond wires at rail joints — find time now. It doesn't take long really, especially if it is all done at once and in spite of what you have been told fish-plates *do not* make the best electrical path — it is too easy for dirt to get in and muck up your best laid wiring plans!

(f) Check your track for straightness, "purity" of curve, high riding spikes, etc. — any one of these may be causing that persistent derailment particularly if accompanied by an odd high or low spot in the trackwork. Do it now!

(g) Check switch controls — excessive use may have caused too much or too little play in the mechanism, rodding, cable or what-have-you.

(3) LOCOMOTIVES Take that super-doooper job now and let's make a test case of it.

(a) Brush off all the dust — if it is supposed to be "out-of-the-shops" it wouldn't be dusty, and if it supposed to be "weathered" you will have done the job to your taste *without* dust!

(b) Remove the superstructure and give the mechanism, wheels, valve gear, etc., a good going over with your favourite cleaning fluid. Stand it in a shallow dish and use pipe cleaners to get at those awkward places. Hell, where did all the "gunk" come from?

(c) Unless you're an expert on motors, don't undertake a major overhaul. Simply clean the commutator; remove any small screws or spikes stuck to the magnet; (How-in-the-aitch did they get there?), repair any frayed motor leads, check on brushes for wear and replace (or reverse) if necessary, and finally give the worm and gear a new grease job.

(d) Finally, take your hypodermic and oil wheel bearings, crankpins, crosshead guide valve gear etc.

Now put her on the track, turn on the juice and watch her go — what a difference!

(4) ROLLING STOCK: Much the same as for locos — remove dust, clean bogie wheels by soaking in cleaning fluid (test first as some fluids may affect insulation, plastic and nylon on wheels) oil axle bearings and polish wheel treads. Give your couplers a clean too, while you're at it, especially if yours are automatics.

Finally, have a general look at the layout — any figures fallen over?, any animals damaged? — tidy them all up and invite us to see your top drawer layout with its well kept, smooth running look!

LEARN FROM THE PROTOTYPE

By Jack Parker

A day's outing with the camera can provide the modeller with a mass of material which can be incorporated in his model railway. This, if carefully reproduced in model form, will make the appearance of your layout very close to reality.

Recently, I came home from a day's outing at Gosford, N.S.W., with a large number of photographs, three of which are reproduced on this page. I have selected these three because of the wealth of detail which they contain.

The first photo shows the locomotive servicing facilities. This is a simplified, compact arrangement ideally suited for modelling. It shows turntable, water tower, ash pit, and coaling facilities. No doubt, the crane is used to scoop ash from the pit as well as convey coal from wagon to tender. Note the small easily modelled control box on the turntable. See the rubbish lying in the turntable pit. There is grass and bush growing close to the turntable rail. Odd pieces of coal lie on the turntable in the foreground.

We are told to "beware of trains". There is a typical N.S.W. colour light signal indicating two routes. Note the walk ways across the tracks on the far side of the turntable. The water tower was featured in a previous issue of A.M.R.M.

At first glance the second photo does not have much of interest. However, points worth noting are the rocks in the cutting, the manner in which the sleepers are almost entirely covered with ballast and the structural details of the bridge. These can all be easily reproduced in model form. Regard the difference in degree of the smoke staining on the brickwork of the bridge. This is probably caused by the gradient of the track, the trains which are pulling up hill are always pouring out more smoke than those which are rolling easily down the grade.

Grass and small bushes grow adjacent to the drain at the bottom of the rocks where there is plenty of water, whereas the rocky surface is mostly bare and eroded by rain water coming down the slope.

The side nearest the camera supports more vegetation as it is a more gradual slope. This growth helps to bind the soil.

The bottom photo shows a through girder bridge which is typical of hundreds in the country but few modellers rarely build them to look like the prototype. Firstly note the rivet detail and the triangular supporting features. Next note the wood decking detail. See the triangular metal block on the approach side which slopes downwards to lead any trailing equipment up over the guard rails.

There is a drain between the tracks. The concrete buttress at the left, as well as supporting the approach up to the edge of the tidal stream, serves also as the foundation for one of the steel catenary posts. A piece of timber across the end of the approach prevents the metals from washing into the water. Below this timber is a concrete wall upon which the steel bridge girders rest. Note the shine on the running rails and the dull rust covered guard rails.

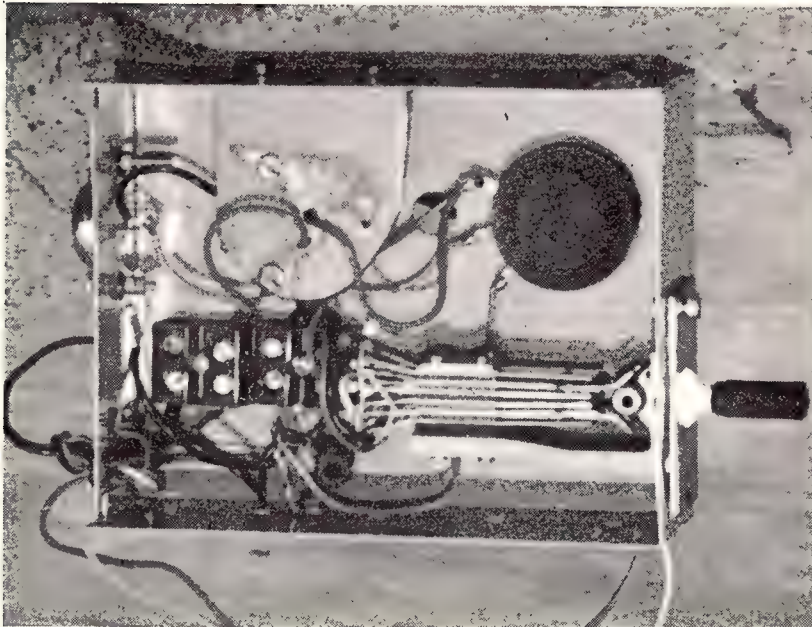


SIMPLE TRANSISTOR THROTTLE

by Terence Carpenter

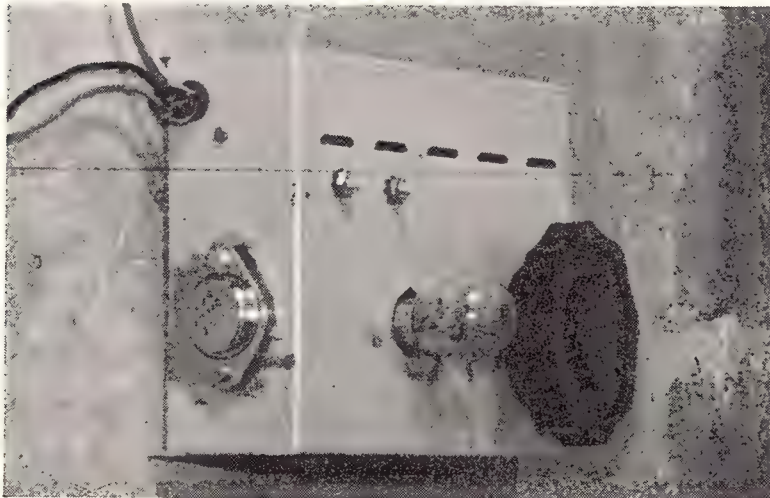
Afraid of tackling your own home made Transistor throttle?

Then here is a simple one evening project (the longest part of the job is making the chassis which has approximately 12 holes to be drilled) which will give you much satisfaction and confidence in your own ability to do things perhaps a little different to the usual.



The photograph above show the simplicity of the layout of the parts underneath the chassis. A small screwdriver, a pair of pliers, a drill and a soldering iron are the only tools needed.

On the left of this photo can be seen the transistor mounted on the outside for cooling purposes. In the centre is the current limiter, a 6 volt, 18 watt car globe. To the right is the knob of the potentiometer.



Don't worry about the cost, the whole project should cost less than a good quality power rheostat provided you have a few odd pieces available.

Although this controller does not have all the refinements of the more complex type of Transistorised Throttle, it can be your first step towards some of the more modern innovations now entering the model railway field, or should I say track?

COMPONENTS REQUIRED

- 1 × MULLARD TRANSISTOR Type AD 140.
- 1 Wire wound potentiometer, 100 ohms, 2 watt.
- 1 × 10 (ten) ohm, 1 watt Resistor.
- 1 × 6 volt 18 watt car globe and socket to suit.
- 1 × Reversing key.
- 1 × 3-pin terminal strip.
- Screw type terminals for input and output connections.
- Piece of metal suitable for chassis, (aluminium, etc.) size $8\frac{1}{2}'' \times 7\frac{1}{2}''$.
- Small piece of aluminium or copper for the heat sink.
- (Actual size of completed chassis: $5\frac{1}{4}'' \times 4\frac{1}{4}'' \times 1\frac{1}{4}''$).

From the circuit you will observe that the Current limiter is connected in the Positive input leg.

Now a few words about mounting the transistor.

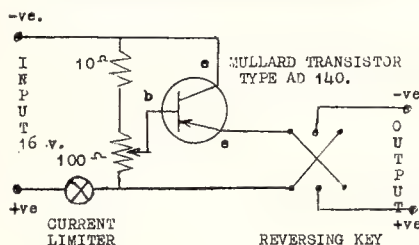
The surface to which the transistor is to be fitted must be flat, clean and preferably dull. Using the mica insulating washer as a guide, carefully mark out the position of the holes to be drilled in the chassis and heat sink, and use a drill sufficiently large enough to avoid any contact with the connections of the transistor, and also the 2 holes for the mounting screws must be large enough for the fibre washers. When mounting the transistor, firstly slip a small piece of plastic tubing about $\frac{3}{16}''$ long over the pigtailed. (Insulation from hook up wire is satisfactory).

Place the heat sink against the transistor, then the mica insulating washer goes between the heat sink and the chassis. Once again I stress that you must ensure that the collector (case) of the transistor and the emitter and base connections are not touching the chassis. When soldering, great care must be taken not to allow overheating of the transistor. The following precautions must be observed.

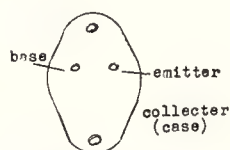
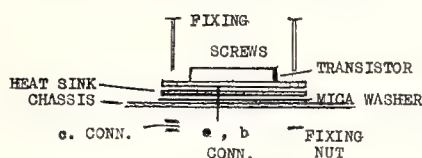
1. Keep the soldering bit and body of the iron well away from the transistor.
2. Grip the pigtail (the 2 connections

SIMPLE TRANSISTOR THROTTLE Cont.

CIRCUIT DIAGRAM OF TRANSISTOR THROTTLE



METHOD OF MOUNTING THE TRANSISTOR.



UNDERSIDE VIEW OF TRANSISTOR SHOWING CONNECTIONS.

protruding from the transistor) tightly with a pair of pliers, (this prevents the heat from the iron travelling to the transistor) and work quickly, soldering the connecting wires on the end of the pig-tail.

3. Hold the pliers in place for a few seconds after the iron has been removed.

The 10 ohm resistor was mounted on the pin strip, but it is not essential to do this. The current limiting globe was mounted so that the bulb itself protrudes above the chassis to eliminate any possibility of overheating the underside of the chassis.

If, when you have completed making your new controller, you find that the speed control is reversed, simply reverse the 2 outside connections on the potentiometer.

The controller was tested with a number of input voltages on various locos, and loads, and best performance was noted with 16 volts D.C. at the input.

Due to the compactness of this controller it lends itself quite well for use as a mobile unit, simply by enclosing the back of the chassis and fitting a suitable handclasp to the unit and having long connections.

The circuit which has been used was taken from the Amateur Experimenter column of the Mullard Outlook, and we are grateful to Mullard (Aust.) Pty. Ltd. for assisting us in this project.

PAINT! — WITH A POLISH

by JEFF BARCLAY

The best of model railroads can be spoiled by unpainted locos. Read how one modeller solved the problem — cheaply and easily.

For those of us who are fortunate enough to own imported brass locomotives or one of the excellent cast zamac kit-built engines, the great headache has always been to supply a paint job worthy of the model.

Custom painting can cost upwards of £5 per loco, depending on complexity. Add colors to it and the price zooms. For this reason alone many modellers have to be satisfied with poor painting, so thick that most detail is hidden, or worse still, operate their pikes with unpainted motive power, which just ain't, if any sort of realism is desired.

However, no more! No longer to deprive ourselves of one sandwich per week, so that eventually we can afford to have our steamers painted by the experts. For the princely sum of 2/7 you can provide yourself with enough paint to cover the entire stable of iron horses on all but the largest railroads.

The secret is 'Zebo'. It is a simple stove polish, manufactured by the makers of Brasso, and readily available at all supermarkets. I first came upon this idea in the April 1954 issue of Model Railroader, but thought that stove polishes were long since extinct. Once I found out that they were still available, I was anxious to see if the local product held the same properties as the U.S. counterpart. To my great satisfaction, it does. I may say at this point that Zebo is the only product tested, simply because it was the only one I could find. The price mentioned above will supply you with 5 ozs.

Now to the method, and it is here that the advantages of Zebo become apparent. There is no method. Brush or spray or soft cloth, it's all the same. Just follow the directions on the tin. Simply put the stuff on. No one is more ham-fisted than this boy when it comes to handling a paint brush, but with Zebo, skill counts for nothing. Brushmarks do not show. You can brush in any direction and the results are the same.

After one coat, there is a distinct

metal show-through, but this diminishes as more 'paint' is applied. I found that 15 to 20 minutes between coats is ample. A pair of brass trucks was adequately covered with one coat, while three or more are required for locos and other large areas. However, this is up to individual tastes. What looks good to me, may not be the thing for somebody else at all. I found that brass castings (such as the trucks) take less to cover well.

After applying the final coat, give the object a rub with a dry brush or dry soft cloth and you will find that it acquires a very realistic painted metal appearance. The more you polish, the higher the gloss. There is no loss of detail. In fact it seems to stand out more, because being raised, it receives a larger proportion of the rubbing process and becomes slightly more polished.

There are disadvantages, yes. With constant handling, the polish eventually comes off, so it is best applied to something that has a minimum of handling. During the polishing process, go easy with the muscles. Too much elbow grease will wear the Zebo right off. But it's easily touched up. On the other hand, if you don't like the results, simply wash it off with water, as Zebo is water soluble.

This fact makes the applying of decals virtually impossible but if you have access to a spray outfit, a coat of varnish will provide a suitable surface. A coat of dull varnish as a final operation will both seal the decal securely and all but banish all trace of the unsightly surrounding film. Better still, use dry-transfer lettering, and all problems are over.

That's all there is to it. A quick, simple and cheap way of supplying that longed-for prototype look to your locomotives. I hope that others can reap some benefit from this method of painting metal locos, whether permanently or on a temporary basis, and that you will be glad you learned how to "Paint!-With a Polish!"

A SOUTH PARK MOGUL

She was dingy, she was humble,
She was modest in the station;
The rust along her boiler plates
Proclaimed a poor relation.

Of the proud ones, the mighty ones
That towered along her side,
She squatting on the narrow gage,
They strutting one the wide.

But when she cleared the city
She breathed with lungs of brass,
As proud as any empress
She stormed along the pass.

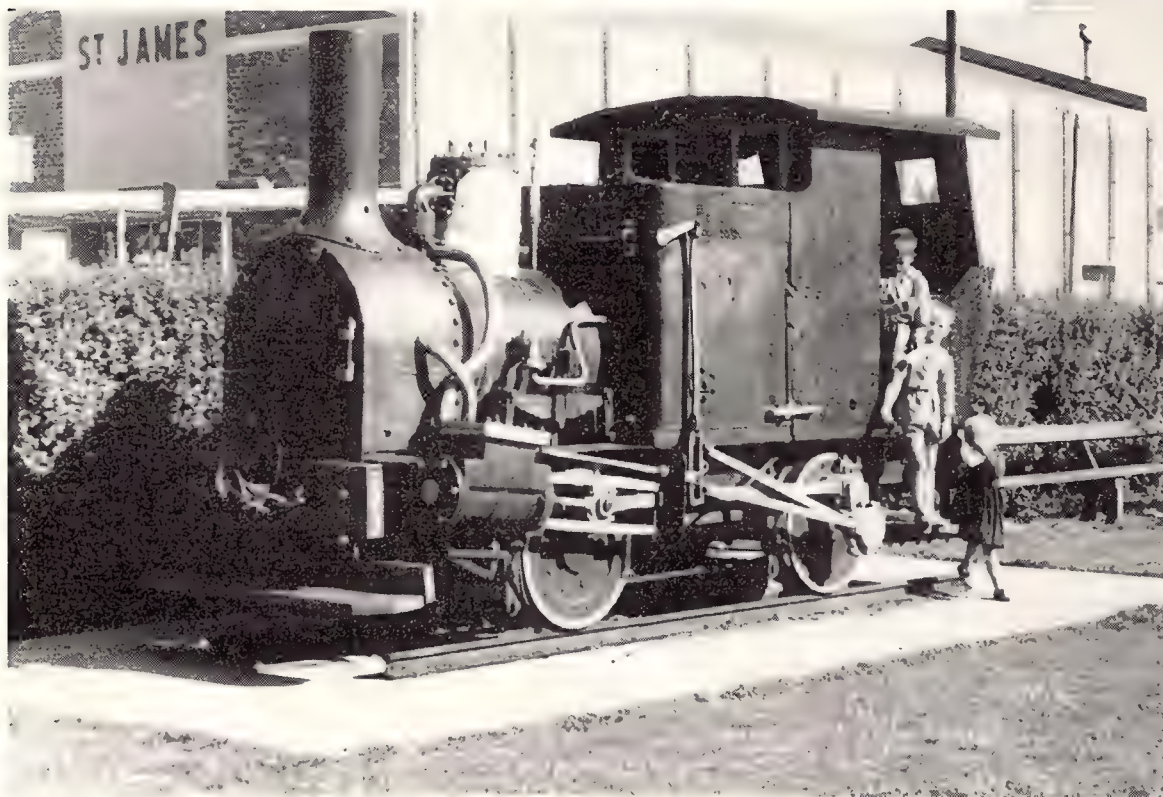
In plumes of black and silver
She crashed the canyon gates,
She rocketed up mountain cliffs,
She snorted where hell waits.

The courts have taken up her rails;
She rusts in Denver town;
From tender and from car step
Her home sick men are down.

Buses roar now between the peaks
Where once her smokestack swayed,
But still I see the Old Gal's ghost
Go ramming up the grade.



the scenic route



TOP LEFT: An early 0-4-0 in 1876. It is one of three worked the Foxton Branch late as 1958 at a sawmill diam. 24 inch. Photo by

TOP CENTRE: Chris Pr N.S.W.G.R. S.R.C. (on left in background. Home ma

BOTTOM LEFT: A Timber hall, of Sydney, N.S.W. him a speedy recovery a

BOTTOM RIGHT: Track w layout at Beverly Hills, layout by Basil. Look fo



The Australasian Model Railroad Magazine

Volume One

April/May, 1963—February/March, 1965

Nos. 1-11



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Annual Index for Volume 1.

NOTE: The first figure after each entry refers to the issue number of the magazine in which the entry may be found. The second number refers to the page in the magazine. A series of such paired numbers indicates a succession of articles on the same subject or by the same author. Regular features, such as Shop Window, Shop Detective, Helper Service, etc. are not listed.

A

- A Beginner's Odyssey, by Don Taylor, 5-20.
- Abutments, Bridge, 1-24.
- An Efficient Point Motor, 11-7.
- An Ore Car, 10-18.
- Around the Walls, by R. Gorrell, 2-16.

B

- Beck, David, article by: The Ruddimyth & Farrago Railroad, 8-12.
- Beginners, Scratch Building for, 1-10, 2-18, 3-28.
- Blaney, Jim, Article by:
 - Round the Loco Shed, 2-21.
 - Model Photo, 2-22.
- Blinking Lights for Level Crossings, 11-18.
- Book Reviews:
 - Australian Railways Today, 4-18.
 - Far Wheels. A Railway Safari, 2-17.
 - Grand European Expresses, 4-18.
 - Iron Horses — American Locomotives 1829-1900, 2-17.
 - Lima Locomotives, 2-17.
 - Model Railway Encyclopaedia, The, 4-18.
 - Railroads of Nevada and Eastern California, 4-18.
 - Railways of Australia, 10-10.
 - Reference Manual and Catalogue for HO Model Railroaders, 2-17.
 - United Railways of Oregon, 2-17.
 - Walthers Model Railroad Decals, 4-18.
- Bridge Abutments, 1-24.
- Bridge, Wood Truss, 11-16.
- Buchanan, Charles, letter from, 2-22.
- Budd, R.D.C. in 2mm Scale, 7-18.
- Buffer Stop, 10-24.
- Build a Water Tank for your HO Railroad, 7-16.
- Building an HO 18 Class 0-6-0T Loco.
 - Part 1, 5-10.
 - Part 2, 6-10.
- Build Yourself a CHG, 11-10.
- Bujack, John, article by:
 - R.F. Lighting for Model Railroading, 8-16.

C

- Calvitto, Peter, Cartoons by: 1-25, 2-24, 3-32, 4-24, 5-24, 6-22, 7-23.
- Camden & Narellan Railway, The, by Les Fordham, 10-11.

- Carpenter, Terence, articles by:
 - A Few Notes on Lever Keys, 10-13.
 - Blinking lights for your Level Crossings, 11-18.
- Carver, Brian S., article by: Do We Use Enough Imagination in our Hobby?, 8-21.
- Cast Your Own Items in Epoxy Resin, 2-10.
- Central Pacific Railway, by Jack Treacy, 1-18.
- Chesters, Michael, article by: Old Lambton Railway Closes, 7-17.
- Colour Light Signal, 5-23.
- Construction articles, general:
 - Abutments, bridge, 1-24.
 - Bogies, Take the Bogey out of, 8-19.
 - Bridge, Wood Truss, in HO, 11-16.
 - Build a Water Tank for your Model R.R., 7-16.
 - Culvert, small, 4-10.
 - Epoxy Resin, Cast your own Items in, 2-10.
 - Platform, Umbrella, an Easy, 2-20.
 - Scenicing your Model Railroad, 4-22.
 - Scratch Building for Beginners, 1-10, 2-18, 3-28.
- Construction articles, Locomotives, see Locomotives & Rolling Stock.
- Construction Hints, see Hints.
- Container, Build a, 7-21.
- Control, Throttle, Transistorised, 5-16, 6-18.
- Coppin, Bert, ideas by:
 - Buffer Stop, 10-24.
 - Water Tank, 2-13.
 - Wayside Tank, 10-17.
- Culvert, small, 4-10.
- Culvert, Stone or concrete, 7-22.

D

- Davies, Fr. Peter, article by:
 - The Face Lift Treatment, 8-10.
- Detail, 11-12.
- Do We Use Enough Imagination in our Hobby?, article by: Brian S. Carver, 8-21.

E

- Electrical:
 - Blinking Lights, 11-18.
 - Colour Light Signal, 5-23.
 - Lever Keys, 10-13.
 - Point Motor, 11-7.

- Relays, 7-11.
- R.F. Lighting, 8-16.
- Semaphore Signal System, 11-13.
- Splicing Wire, 6-24.
- Transistor Throttle, 5-16, 6-18.
- Epoxy Resin, Casting, 2-10.
- Exhibitions:
 - Sydney 1963, 3-15.
 - Sydney 1964, 9-9.

F

- Face Lift Treatment, The, 8-10.
- Fenton, M.E., article by:
 - A Freelance Steam Railcar, 10-9.
- Fordham, Les, article by:
 - The Camden & Narellan Railway, 10-11.
 - An Airfix Engine Shed Conversion, 10-26.
- Fraser, William, C., articles by:
 - More Than a Century of Steam, 8-9, 9-13, 10-17.
 - New Zealand's only Mallet, 11-9.
- Freelance Brake Van, 2-13.
- Freelance Steam Railcar, 10-9.

G

- Gill, F.G., articles by:
 - An Easy Umbrella Platform, 2-20.
 - An Ore Car, 10-18.
 - A Small Culvert for your Layout, 4-10.
 - Build a Container, 7-21.
 - Bridge Abutments, 1-24.
 - New Uses for Old Rails, 3-10.
 - Siding for Motor Scooter or Hand Trolley, 7-22.
 - Stone or Concrete Culvert, 7-22.
 - Take the Bogey out of Bogies, 8-19.
 - Tips for Splicing Wire, 6-24.
- Gorrell, Robert W., article by:
 - Around the Walls, 2-16.
- Grierson, Jack, articles by:
 - Building an HO 18 class 0-6-0 Tank Loco, 5-10, 6-10.
 - The Layout that Jack Built, 4-12.

H

- Hand Trolley, Siding for, 7-22.
- Harvey, Robert C., article by:
 - N.S.W.G.R. 4-wheel Refrigerator Van, 11-10.
- Henry, R.J., article by:
 - Relays for Model Railways, 7-11.

Hermann, A.E., article by:
The Story of Central Queensland Railways, 3-24.

Hints:

Buffer Stop, 10-24.
Container, 7-21.
Couplers, 3-13.
Culvert, 7-22.
Detail, 11-12.
Hand Trolley, 7-22.
Imagination, 8-21.
Level Crossings, 10-17.
Loco Shed, 2-21.
Rails, 3-10.
Water Tank, 2-13.
Wayside Tank, 10-17.
Holland, John, article by:
Magnetic Magic for Hornby, 3-13.

J

Jamieson, David, book review by, 2-17.

K

Kennewell, Wally, article by:
Let's Ride the S.G.R., 3-26.

L

Layouts, Descriptions of:
A Beginner's Odyssey, 5-20.
Around the Walls, 2-16.
Camden & Narellan Railway, 10-11.
Central Pacific Railway, 1-18.
Layout that Jack Built, 4-12.
N. Z. Club's Ideal Clubhouse, 11-19.
Ruddimyth and Farrago R.R., 8-12.
South Gippsland R.R., 3-26.
Layout that Jack Built, by Jack Grierson, 4-12.
Let's Ride the S.G.R. by Ian Petherick & Wally Kennewell, 3-26.
Lever Keys, notes on, 10-13.
Leuven, Paul, article by:
Cast Your Own Items in Epoxy Resin, 2-10.
Plans by:
Budd, R.D.C. in 2mm scale, 7-18.
Water Storage Tank & Stand Pipes, 7-13.
Lighting, R.F., 8-16.
Locomotives & Rolling Stock Construction:
Budd, R.D.C. in 2mm scale by Paul Leuven, 7-18.
Building an HO 18 class 0-6-0 Tank Loco, by Jack Grierson:
Part 1, 5-10.
Part 2, 6-10.
Build Yourself a CHG, by Chris Pratten, 11-10.
Freelance Brake Van by Chris Pratten, 2-13.
Freelance Steam Railcar by M.E. Fenton, 10-9.
NSWGR 4 wheel Refrigerator Van by Robert C. Harvey, 11-10.
Ore Car, An by F.G. Gill, 10-18.
The Face Lift Treatment by Peter Davies, 8-10.

Loco Shed Detail, 2-21.
London Letter, 2-22.

M

Magnetic Magic for Hornby, 3-13.
McCarthy, John, article by:
Alice — the End and the Beginning, 4-16.
Down and Under, 7-24.
More Than a Century of Steam, by William C. Fraser, 8-9, 9-13, 10-17.
Motor Scooter, Siding for, 7-22.
Mulhall, Kel, article by:
A Wood Truss Bridge in HO, 11-17.

N

N.M.R.A. 9-16, 11-5.
Notes on Lever Keys, 10-13.
N.S.W.G.R. 4 wheel Refrigerator Van, 11-10.
N. Z. Club's Ideal Clubhouse, 11-19.

O

Ore Car, an, 10-18.

P

Parker, John, cartoons by: 9-21, 10-23, 11-23.
Petherick, Ian, article by:
Let's Ride the S.G.R., 3-26.
Plans, Prototype:
Commonwealth Railways Covered Goods Wagon Class VC. 6-27.
1800 H.P. Goodwin-Alco, Class 45, D.E.L., 1-27.
NSWGR Container Wagon, 3-27.
N.Z. Railways Insulated Meat Wagon Code Vs, 9-27.
Q.G.R. CMIS Steel Refrigerator Car, 4-27.
Q.G.R. 45' Steel Wagon Class W.H.O., 7-27.
S.A.R. Composite Bogie Goods Brake Van, 5-27.
S.A.R. Ore Wagon Class On, 11-27.
Tasmanian Railways Diesel Hydraulic Loco Class W, 10-27.
V.R. Timber Gondola Wagon Code QR, 2-27.
W.A.G.R. 60T Bauxite Hopper Class XB, 8-27.
Platform, Umbrella, 2-20.
Point Motor, Efficient, 11-7.
Pratten Chris, articles by:
A Freelance Bogie Goods Brake Van, 2-13.
A Prototype Station Plan, 9-20.
Build Yourself a C.H.G., 11-10.
Prototype Railway articles:
Alice — The End and the Beginning, 4-16.
A Prototype Station Plan, 9-20.
Central Queensland Railways, 3-24.

Locomotives on the N.Z. North Line, article by David Reddick; Photos and research by Gary Redward: 6-16.
More Than a Century of Steam, 8-9.
More Than a Century of Steam, 9-13.
More Than a Century of Steam, 10-17.
New Locos for Maree — Alice Line, 7-22.
New Zealand's Only Mallet, 10-9.
Night Cane, 7-10.
Old Lambton Railway Closes, 7-17.
Progress, 7-22.

R

Rails, old, uses for, 3-10.
Reddick, David, article by:
Locomotives on the N. Z. North Line, Redward, Gary, Photos and research, 6-16.
Relays for Model Railways, 7-11.
Rolling Stock Construction, see Locomotives and Rolling Stock.
Round the Loco Shed, 2-21.
Ruddimyth & Farrago Railroad, by David Beck, 8-12.

S

Scenicing Your Model Railroad, 4-22.
Siddall, Russ. A., article by:
The Siddall Super-Super Semaphore Signal System, 11-13.
Signal Colour Light, 5-23.
Signal, Semaphore, 11-13.
South Gippsland Railroad, by Ian Petherick & Wally Kennewell, 3-26.

T

Take the Bogey out of Bogies, 8-19.
Tank, Loco, 0-6-0, Construction, 5-10, 6-10.
Tank, Water, 2-13.
Tank, Wayside, 10-17.
Taylor, Don, article by:
A Beginner's Odyssey, 5-20.
Photos by:
Water Storage Tank, 7-13.
Throttle Control, Transistorised, 5-16, 6-18.
Transistor Throttle Control, 5-16, 6-18.
Treacy, Jack, article by:
Central Pacific Railway, 1-18.
Trolley, siding for, 7-22.
Truss Bridge, Wood, in HO, 11-16.

W

Ward, Allan, article by:
Night Cane, 7-10.
Water Storage Tank and Stand pipes, 7-13.
Water Tank, 7-16.
Way, John S., article by:
Build a Water Tank for your HO gauge Railroad, 7-16.
Wayside Tank, 10-17.
Wheeler, John, articles by:
Scratch Building for Beginners, 1-10, 2-18, 3-28.
Scenicing Your Model Railroad, 4-22.
Wire Splicing, 6-24.
Wood Truss Bridge in HO, an, 11-16.

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Robertsville on the "Stroud Line", showing the Main Street. The town is the second of four on the layout which belongs to Bill Christie, of Thornleigh, N.S.W. Buildings are left to right: Saloon, Boarding House and Hotel

A (Mills) built for New Zealand Railways in Wellington by M.R.E.W. Mills. They first in North Island and one was in steam at Greymouth. Engine weighs 8 ton, wheel span.

of Boremore, N.S.W., scratch built the M.R.C. Refrigerator Vans. Bilteezi buildings are, lower arms are "Shunt-ahead" signals.

Truss Bridge scratch built by Kel Mulpresent is on the sick list and we wish of his excellent models.

well underway on Basil Hammersley's new. This has the makings of another good one more pictures later.



WAGON LOADS by LES STREET

You flick on the switch, ease the controller on slowly and your crack freight loco steams (or "diesels" (?) its way on to the main line and away. Past you goes an impressive collection of Airfix, Hornby, or Peco wagons — just the same scene as on a thousand or so other layouts. But need it be? Even if you don't build your own open wagons you can easily make them *look* different by putting in some eye-catching but easily made loads. Yes, I know coal, logs, sawn timber, sacks or drums of this and that are easy, but what about something a bit different. Here are a dozen easy-to-duplicate scenes you must have all seen plenty of times.

(1) CARS & TRUCKS

Matchbox make a wide range of cars and trucks, so why not load up your flatcar with 2 or 3 Fords, VW's or what-have-you? Don't forget to chain them on in the best prototypical fashion and make sure that they are at least a little bit dirty!

For a change why not depict a smashed-up car being railed back to the owner's home-town after an accident. Get a couple of *cheap* plastic cars and wrap a piece of heavy copper wire around your soldering iron leaving a piece protruding for a "weapon". Heat up the iron and proceed to put a couple of dents in the roof, boot and bonnet and mangle one mudguard completely.

Scratch the sides a bit too and repaint to taste. Place the load on your wagon and I'll bet you someone will compliment you on your realism.

(2) SCRAP IRON

Every now and then you see an Lc wagon en route to Pacific Steel, piled high with all sorts of scrap metal. Easy

to do? — Well, have a go! A couple of plastic kit wings, etc., from a 'plane kit would help to get you started and your imagination and your scrapbox will do the rest. Caution — don't get carried away and make the wagon too heavy.

(3) RAILWAY WORKERS HUT

A trip to the yards, a few measurements and a photo or two, some card — that's all you need to make one of these items, or better still, two or three. Chain them on to your flattop and spot them on a siding in your country station. A set of steps in place, 'ole Joe sitting on his doorstep, some card clothes hanging on a line to the nearest suitable post and presto — another item of interest.

(4) FARM MACHINERY

Hay rakes, haybalers, discs, harrows, etc., all make interesting loads and your Farmer Brown *must* use some of these items on his farm. Some commercial firms produce these items but they could be easily made from wire, card, and plasticine. Plasticine? Yes, it's handy for modelling those odd shapes and it can be painted if sealed first.

The newspapers have plenty of photos and advertisements depicting farm equipment, but if you are in doubt a genial gent named Fisher would no doubt help you with a detailed description — caution, it might be framed in colourful terms!

(5) REINFORCING STEEL

Every now and then a flat car passes through Frankton with several tons of straight reinforcing rods aboard. They usually are in 20 to 30 foot lengths and in 1 ton bundles. Thin florists' wire can be bought in cut straight lengths. It would be a simple matter to (1) wire a number of lengths together with two or three fuse wires or cotton bands, (2) cut to the required lengths, (3) chain on to your Ub as another load for that well-known construction company.

(6) CRATED MACHINERY

Balsa blocks cut to various sizes and shapes with assorted card braces and straps help to give your loads a business-like effect. Don't forget the trade marks — BRIZZELLS CAST COPULATOR — or CAUTION — FRAMISTER or even DOUBLE CHACKFLASTER — STOW AWAY FROM GLONGSTEMMERS — all these are sure to arouse interest!

(7) ARMY "FREIGHT"

Occasionally the Army uses the railways to freight light tanks, bren carriers, 25 pounders, etc. What an interesting load a "convoy" of 3 or 4 wagons would make as part of your train. Airfix make several of these items and various other commercial makes are also available — so you can't say that this idea would be difficult to put into practice.

(8) BOILER/BUTTER CHURN/TRANSFORMER

Commercial models of the first and the last are readily available and in any case are quite simple to make. The Churn would have to be scratchbuilt but again it would be quite simple to make a representative model. All of the items would make eye-catching and "different" loads.

(9) PRECUT HOUSE

Sure, you've got a couple of wagons loaded up with sawn timber and very nice work too! However, let's have a bash at something up-to-date.

With the accent on pre-cut housing, many a flatcar goes past with a pre-cut house frame aboard. These would be particularly easy to model as all the timber is in oblong packs with no protruding pieces.

The simplest way would be to cut your block to size and mark the timber with horizontal lines (and vertical at each end) and chain on. For more realistic results use a stack of 3/32" balsa boards glued together with the ends cut vertically and the top layer individual 3/32" square strips. Don't forget the advertising on the sides of the package. — "ANOTHER BEAZLEY HOME" or "P.T.Y. FOR QUALITY HOMES" or even "PETE'S PRECISION PRECUT"!

(10) TRACKWORK

The other day I saw a couple of Ub's in a train, each loaded with about four or five lengths of track complete with sleepers. They had obviously been taken up "holus bolus" for they were complete with earth, ballast and weeds still adhering to them. So there's a switch — either load a couple of wagons with *new* track being taken to a new siding or *old* track being brought back. When you get tired of the scene you can put the track to good use on your layout — waste not, want not!

(11) POWER POLES

One flat car loaded with power poles is quite common and easy to make too. Poles can be either wood or prestressed concrete. The wooden ones can be made of dowels suitably filed, sandpapered and stained, and the concrete ones can be balsa glued together in the open pattern to typical of these items and painted to suit. Be sure to chain each type down with chains and/or rope.

(12) A BOAT

Bill Brown is receiving a new cabin cruiser from a maker at New Plymouth and it is being sent by rail. The boat can be a suitable commercial item in plastic or diecast metal or a balsa one would be easy to make. Again, be sure to provide a proper cradle to hold the load securely.

Well, there's a few ideas to "chew on" so go to it lads. A final word — watch your clearances and don't make your loads too heavy!

Good luck!

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WHAT'S WATTS

By ROGER HENRY

This article is concerned with the terms power and watts and their application in general to model railway circuits. A few definitions first.

Power is consumed when electricity does work.

Work is the conversion of energy from one form to another.

Watts is the unit in which the rate of work is measured.

Thus a watt is the unit of electrical power and is the rate at which electrical energy is converted to some other form of energy, namely heat and motion.

Consider heat first. As current flows through a conductor the friction or resistance offered to it causes the conductor to heat up. The more current the more heat.

The conductor, being able to release only a certain amount of heat to the outside air, will overheat if too much current is applied.

Radio resistors are often used in rail-road circuits mainly as voltage dropping resistors for lamps and in track circuiting. They come in a variety of watt ratings mainly $\frac{1}{8}$; 1; $1\frac{1}{2}$; 3; 5. The price increasing with size.

If they are subjected to too much power, they will overheat and destroy themselves and possibly cause a fire.

The calculations involved are simple and the three equations are given below. It is noted that there must be two known quantities.

P = Power in watts.

I = Current in amps.

E = Voltage in volts.

R = Resistance in ohms.

$P = E \times I$ i.e. volts multiplied by the current.

$P = I^2 R$ i.e. the current squared by the resistance.

E^2

$P = \frac{E^2}{R}$ i.e. the voltage squared divided by the resistance.

Thus the power in a circuit can be readily calculated and suitable ratings chosen.

An example, a 120 ohm resistor is used to drop the voltage to a lamp from 12V to 6V. 50 milli amps will flow in the circuit. What power rating should the resistor be?

$$P = I^2 \times R = \frac{50 \times 50 \times 120}{1000 \times 1000} = \frac{6}{20} = .3w.$$

Thus a .5 watt resistor would be ample. Likewise, transformers are usually rated

in watts. This being the maximum power it can handle without overheating. Thus, if a transformer is rated at 60 watts and its voltage output is 12V, the maximum current is:

$$P = 60$$

$$I = \frac{P}{E} = \frac{60}{12} = 5 \text{ amps.}$$

Thus where heat is going to be generated do not exceed the given rating of your equipment.

The other form of energy which appears is motion. This cannot be so readily calculated but some useful comparisons can be made.

Two motors may consume the same amount of power but one produces more pull than the other, it is obvious that one is inefficient or faulty.

Nor is operating voltage a criterion of efficiency. A motor that runs at 10 Vs at 2 As is less efficient than one running at 12 Vs at 1 A. When both engines are producing the same effect one requires 20 watts, the other 12 watts.

Thus power consumption can be used as a comparison between locos and can give an indication of efficiency loss due to friction or poor motor design.

A reliable ammeter and voltmeter are of course essential for accurate readings.

THE AUSTRALIAN MODEL RAILWAY ASSOCIATION

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SATURDAY, OCTOBER 2	9 a.m. to 10 p.m.
MONDAY, OCTOBER 4	9 a.m. to 10 p.m.

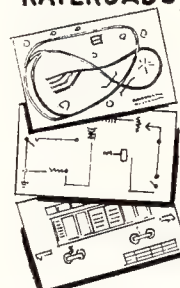
(Six Hour Day — Public Holiday)

ADMISSION: Adults 3/- each — Children 1/- each

There will be an extensive display by Model Railway Clubs, Hobby Shops, Trade Distributors, and Private Exhibitors, which will cover every phase of the hobby. Railways and tramways, electric and live steam, from the small scales to the largest, are combined to show you modelling at its finest. The hobby is becoming more popular every year with new models coming into being. Come along and bring your family and friends.

JOHN DUNN, Exhibition Chairman.

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HINTS

TOOLS FOR WOOD WORKING No. 1. "The Bench Hook"

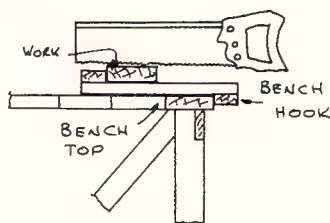
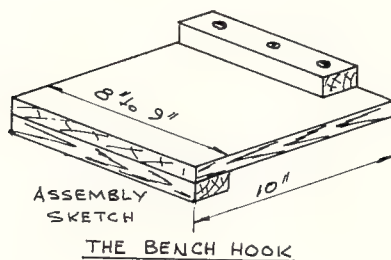
This simple device can best be described as an aid rather than a tool. Every wood worker from builder to "ship in bottle" modeller should have one. The bench hook is almost invariably homemade and is intended for use with the tenon saw and dovetail saw.

Its function is to hold the work piece steady and in so doing requires practically no effort apart from the actual sawing.

It will accommodate anything from a match stick upwards. The opposite extreme is merely limited by the capacity of the saw being used.

As the illustration shows it is simply a flat piece of timber with a cross piece screwed to both ends but on opposite sides. One cross piece is left shorter than the width of the base, the saw working in the resultant gap rather than being allowed to fall to the bench after the work piece has been cut through.

It is obvious that the gap should be left or righthanded according to the user. Any short scraps of 2" x 1" timber can be used together with a piece about 10" x 9" for the base.



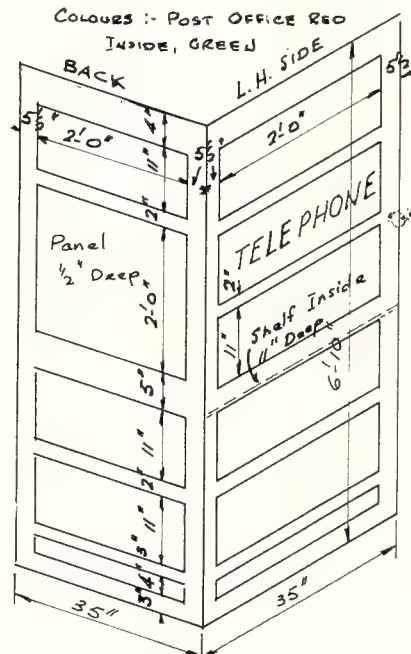
SKETCH SHOWING POSITION
OF BENCH HOOK IN USE

The job should be screwed together to prevent the base from warping. Three or four screws 1 1/4" x 8 gauge in each piece of 2 x 1 are sufficient, glue is not necessary and may squeeze out, and when dry would prevent the work piece from seating snugly. The relevant illustrations are self explanatory.

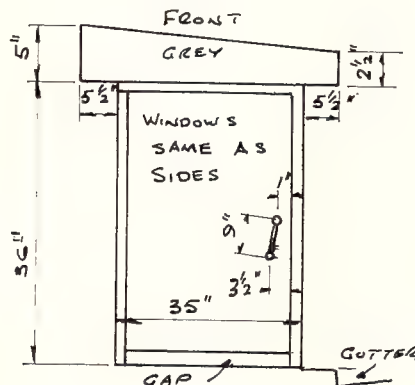
POST OFFICE FITTINGS

by R. J. Henry

Every Railway Station has at least one or more public telephones provided on it. Also there is one in every main street. Design varies and there are many in Australia which are very similar to the excellent models of the English prototypes. However, there is a distinctive P.M.G. design which is shown with dimensions below.



Telephone cabinet.

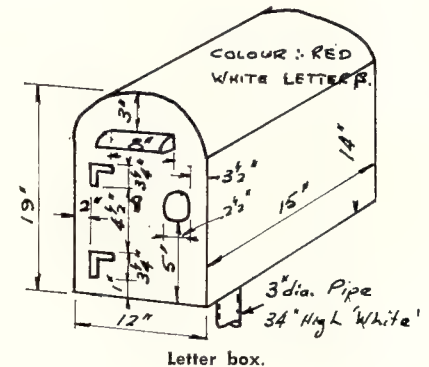


It could be easily modeled in a short time. A tried method is to use clear perspex painted green inside and P.O. red on the outside, the windows being masked with tape. The roof could be balsa with a grain of wheat bulb inside. It should be removable with the leads to the lamp inside the cabinet. The phone and multi-coin mechanism is black balsa or putty. The buttons are picked out in silver. A piece of wire does for the handle and a little block of concrete to sit it on.

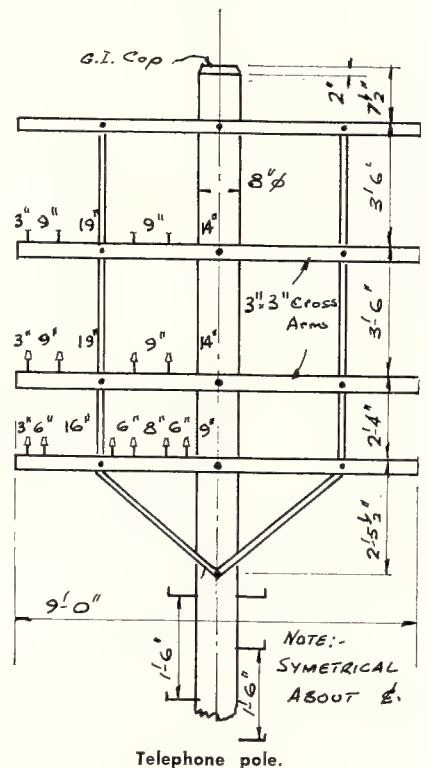
A similar method does for the letter box. A modern steel type being shown on

the drawing. No hints for construction are needed here.

Also shown are the dimensions for a trunk line telephone pole as would be seen along a railway route. The top arms carry the trunk lines and the bottom arm the subscribers. A look outside your front door will show you the colour scheme. This may seem tedious but the results will justify it.



Letter box.



Telephone pole.

PAINTING BY NUMBERS by Les Street

For painting models, here are several old but always sound tips:-

(1) Always paint when you are relaxed. When you are tensed up, painting your super-dupa loco is not the best way to relax.

(2) Matt paints are always easier to use than the hi-gloss variety. Never use the latter when the former will do.

HINTS (Cont.)

(3) In small scale work, the contrasts should be toned down and the shades should be rather *lighter* than the prototype shade.

(4) Two thin coats are better than one thick one.

(5) Use the right brushes. Cheap brushes are expensive in the long run. Use flat chisel shaped brushes for large surfaces to cut down brush marks.

(6) Take good care of your brushes. Always wash them out in the appropriate solvent or support them in a bottle with the bristles *clear* of the bottom to avoid bending them.

(7) Don't work in dusty conditions and don't handle the model on the exposed surfaces. *Everyone's* skin is oily and this won't help your finish.

(8) If painting plastic, *always* try out your paint on a scrap piece or on a concealed model surface in case the paint damages the plastic surface.

(9) Clean your model *properly* before painting.

(10) If you are not *really* satisfied, do it *again*!

A DISPLAY CASE FOR YOUR MODELS by Les Street

Don't leave your prize locos and rolling stock to gather dust during periods of holiday or inactivity — build a display case and put them in it. It'll be handy too for carrying them when you visit.

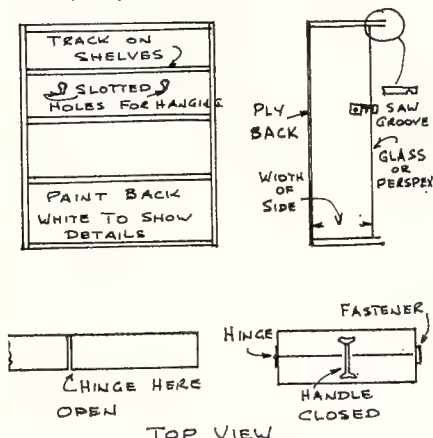
The sketch sets out the general idea. No dimensions are given as each of us have different sizes of equipment.

If the top and bottom are made slightly deeper than the shelves and grooved throughout, the glass or perspex front can be pushed either way for access to models. A turnbutton at each end will prevent it from coming right out (unless you want it so) and saves making a door.

For transporting models use foam rubber packing or rubber bands to hold models in place and add a strap handle to the top. Lastly, use screws and glue, *not* nails.

For a fancy job make 2, hinge together, add a clip fastener and you can carry a lot of items.

Go on, give yourself and your models a treat, they'll last longer.



RECORD RUN...



The first mainline diesel-electric locomotive built in Australia, GM1 of the Commonwealth Railways (which recently completed 2,000,000 miles in service) has maintained an average daily mileage in excess of 400 miles without making allowance for servicing and maintenance periods.

The Commonwealth Railways have 11 diesel locomotives which have completed between one and two million miles in service and it is expected that the "Robert Gordon Menzies" would complete at least another one million miles.

GM1 was named **Robert Gordon Menzies** by the Prime Minister, when it went into service at Port Pirie in November, 1951. Since that date it has operated on both passenger and freight services between Port Pirie Junction and Kalgoorlie and between Port Augusta and Marree.

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WILLS FINE CAST LOCO KITS:

These are body kits only. Designed for Tri-ang & Hornby chassis e.g. LNER Pacific A2 fits Britannia £7/16/6, GWRUI fits Hornby 0.6.0. £3/2/9. Write for list.

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AN EYE FOR DETAIL (Part 2)

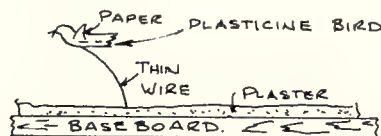
PART 1 APPEARED IN THE DEC. 1964/JAN. 1965 ISSUE

By LES STREET

I hope that the previous few ideas have "triggered off" your thinking on this interesting question and while the "iron is hot" how about these little tricks, have you tried them yet?

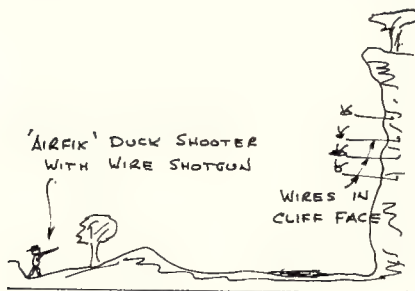
(1) FLYING DUCKS:

Many layouts have creeks and rivers, ponds, etc., and some have ducks or swans resting on the calm waters. But how many have flying ducks, swans, seagulls, birds or what have you? Not many — why not? — it's easy.



Study a suitable photograph, then model your bird in plasticine, add wings of thin paper and support on a thin wire so that the bird appears to be in flight just above the surface. Remember that most viewers will be looking down at the scene, so that if the bird (or better still, several birds) is carefully painted and the thin wire touched up in a colour which blends with the scenery the effect will be most realistic.

Although the obvious thing to do is to support the bird *above* the surface of the "earth" or "water" a little thought will show that it would be equally effective (if carefully done) to show the bird flying under trees and bridges, (by hanging the bird instead of supporting it) or flying alongside a cliff face.



(2) LOOK, MUM, THAT MAN DROPPED HIS BEER

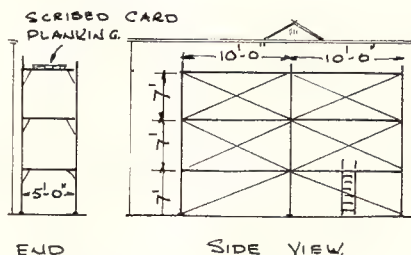
The scene is the corner of the street outside your town's pub. On the corner stand Mum and young Billy (Slater's) and looking sorrowfully down at the broken beer carton is Throgmortonski (with a name like that he *has* to get drunk to forget it). Throgmortonski is Airfix suitably heated and bent to suit and his gaze rests on his carton (brown card), spilt beer (varnish), and broken glass (small pieces of "glitter" from Xmas decorations).



Incidentally, if you want to alter plastic figures, don't forget you can cut them to suit, glue back in place, patch up with glue and repaint. Properly done, you can't tell the figure has been altered.

(3) A REPAINT JOB

What about giving that building a face-lift? A few Airfix "painters", some pots of paint (thin wall tube offcuts) and of course a scaffolding around the building. This latter item can be made in sections from wire soldered or glued together in a simple jig and the sections can then be fixed in position around your building. When you tire of this you can easily take it down or put it up around another building.



(4) THE SURVEYOR AND HIS MATE

You've all seen the surveyor and his mate in action and you can easily duplicate this scene on your layout. All you need is one surveyor (Slaters or Airfix), one mate (ditto), a theodolite for the former and a staff for the latter. The theodolite is a scrap of balsa mounted on a wire tripod and the staff is another thin strip of balsa painted black and white in alternate 3/16" wide bands. Set the two in place on your road 10" or more apart with a sign or two "SURVEY PARTY AHEAD" and that's all there is to it. Easy, wasn't it!

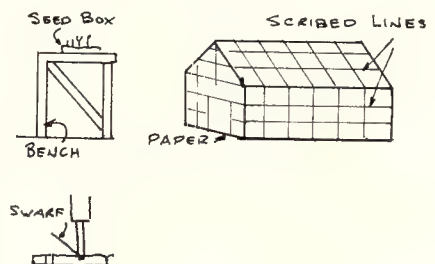
(5) HARRY BUILDS A CABIN CRUISER IN HIS BACK YARD

In spite of the neighbours' complaints Harry spends most of his evenings and weekends working on his new 16 foot cabin cruiser — he wants to finish it by Xmas! First of all you need a boat. Take your pick from the Matchbox job, one of Woolworth's plastic toy boats (miniature) or knock one up from card

or balsa. Support it on some balsa trestles, add a rough looking temporary roof slung overhead on poles, the roof can be corrugated iron (milk bottle top foil) or a tarpaulin (silk or cotton cloth) and clutter up the immediate surroundings with a stack of timber (balsa), odd paint tins (tube offcuts), a ladder or two, a sawbench (balsa block with card top and thin metal segment for a blade), a couple of saw stools and a bench (card or balsa), a few tools (wire), and a couple of life-belts (circles of string painted white). A pile of sawdust, short timber offcuts and a couple of crates (balsa and ostensibly containing the motor) will add to the scene. Go to it!

(6) THE KEEN GARDENER

Old Tom is a real garden lover and in the back corner of his section is his pride and joy — his glasshouse which contains all his pet hothouse blooms. The glasshouse is best constructed from thin Perspex or clear plastic cut to shape and glued together. The timber framework can be represented by lines scribed into the surface before assembly. Wash a coat of your selected colour over the Perspex and into the lines scribed and before it is dry wipe it off the surface leaving the scribed line "timber" frames "painted" green or brown or what have you. The door had best be timber below the handle line so glue on some paper or card and paint to suit.



Tom has some plant benches inside, so make these out of balsa and set card (painted earth colour) on top for seed boxes.

Flowers can be represented in a number of ways — dabs of paint, coloured sawdust, lichen, etc., but one of the most effective is, I think, old plastic toothbrush handles which come in various colours.

Snap off a length, hold in your vice and drill a hole with a very fine drill. At the right speed the drill will "cast up" a spiral swarf which makes ideal tall blooms.

"Plant" this in your boxes and you've got some nice "plasturtiums"!

BRIDGE OVER THE RIVER KWAI

(Reprinted from "Reveille" the official journal of the Returned Servicemen's League).



The infamous death railway, built by prisoners-of-war and coolies, disappears towards the distant hills of Burma. It now crosses a post-war steel bridge built about 200 yards above the former site of the Bridge over the River Kwai.

Quietly flows the Kwai... mute witness to violent death amid monsoonal turbulence 20 years ago. Here in this humid, flat valley with the Thailand sun searing its inhabitants like ants in a fry-pan, allied prisoners-of-war suffered and died in their thousands.

More than 16,000 prisoners-of-war including 1362 Australians, died from ill-treatment, malnutrition, disease and drowning. Some luckier ones died quickly from execution by their Japanese captors.

Twenty years ago, in June and July, 1943, hundreds of prisoners died from cholera which rampaged unchecked through their emaciated ranks.

An unknown number of native coolie labourers also died. Some estimates are as high as 30,000.

All that suffering and death resulted in less than 50 miles of railway line being built between the Western Thailand town of Ban Pong and the Burmese border. After WWII, the infamous railway was bought by the Thai Govern-

ment and 33 miles of it is still in use today.

The Bridge over the River Kwai, of motion picture fame, has long disappeared, leaving few remnants as reminders of the hardships of its hand-built labour. In its place, a few hundred yards upstream, is a steel structure carrying a single track across the river. Local people have laid a plank foot and bicycle path between the rails providing pedestrian access between both banks.

Troops of the 2nd Batt., Royal Australian Regiment, commanded by Lt.-Colonel A. B. Stretton, were the first body of Australian soldiers on duty in Thailand to visit the historic scene of WWII.

The troops were in Thailand for SEATO Exercise Dhanarjata — the Treaty Organisation's largest ground operation, in which 25,000 soldiers from the eight member nations took part.

Nearby Kanchanaburi, a neatly kept, well-grassed war cemetery, contains more than 7000 graves of Allied prisoners,

including 3568 from the United Kingdom and 1362 from Australia. There are two more war cemeteries in the area.

T.C. has keys and other miscellaneous items to offer such as Terminal Strips, Jacks, Eyeball & Drop Shutter Indicators, etc... Send S.A.E. with requirements.

Lever keys 2/3d ea.

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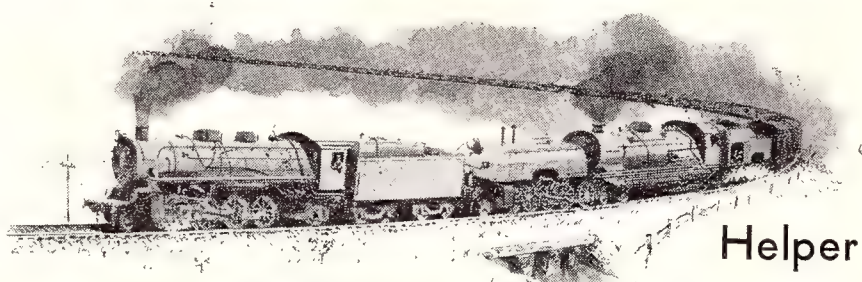
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Helper Service

MODELLERS. What are your problems? Write to this magazine and we will endeavour to put you on the right track.

Q.: I have quite a large Fleischmann train set, but find I am unable to purchase Fleischmann transformers in Australia. Why is this?—U.A.F.

A.: Fleischmann mains transformers do not meet the requirements of the Electricity Commissions, and therefore it would not be practicable for the agents to import these items and have them modified locally. We must emphasise once again that transformers are in fact mains appliances, and recommend you examine the range of model electrical equipment offered by Hammant & Morgan, at your dealers. Please note that the excellent motor design of Fleischmann locomotives, makes them comparatively responsive, and if using, for example the Hammant & Morgan CUI controller, on a supply of 12 volts D.C., you will need a higher resistance mat than is fitted to the CUI as standard. Mats of higher resistance are available, and can be fitted by your dealer. We would recommend a resistance from 0 to at least 80 ohms.

Q.: I have quite a deal of trouble with my Tri-ang "Lord of the Isles" derailing over points, particularly on the curved section of the points at the frog. Could you suggest a remedy? F.E.T.

A.: In contrast to other Tri-ang bogies the one on this locomotive has outside frames, and the wheels are journaled in the same manner as those on the older passenger cars. On inside framed Tri-ang bogies, the wheels are a firm force fit on the axles, and accordingly the back to back measurement is held correct with some surety, while on the outside framed type it is possible for the wheels to move apart slightly, making for an excessive back to back distance, which will allow the wheel passing through the flangeway of the wing rails to strike the frog of the points.

If the wheels are still a firm fit on the axles, the remedy is to simply bring the wheel sleeves close together, but if they are loose, small washers between the wheels and the frames will solve the problem. Check these procedures before resorting to a spring on the bogie radius arm, as springing the bogie will severely reduce the adhesion of the drivers, and may negate the worth of the Magnadhesion, making it almost impossible to haul a realistic train load.

Q.: Are plans available for N.S.W. Railways rolling stock? G.V.T.

A.: The Department has available plans and photographs of their equipment, at a nominal charge, and plans are available from dealers, at least in some Sydney model stores, for the following: MHG goods brake van, BWH bogie wheat hopper, MRC steel frame refrigerator, the 50 Class loco. Other plans are in course of preparation, and are prepared by Mr. J. MacMicking, 14 Stan St., Willoughby, N.S.W., to scales of 3½, 4 and 7mm to

the foot. Our own S.C.R. Plan and Print Service also features Australian prototype plans on the last page of each issue of the A.M.R.M. Most back numbers are still available.

Q.: I am considering joining N.M.R.A. but as I am modelling African models to 3'6" gauge, wondered if the Standards and Data Sheets cover this size. P.O.K.

A.: The current issue of N.M.R.A. Standards, Data Sheets, and Recommended Practices do not cover this gauge, although there are many items on narrow gauge, and adequate Standards for 3'0", which would be helpful. You do not mention what scale you intend modelling in, but it will be of interest to you to know that the Sunshine State Division of the Southern Cross Region of N.M.R.A. (i.e. Queensland) are presently working on a set of Standards for HO3½. The Divisional Representative of the Sunshine State Division, is Mr. Dan Sheehan, 68 Mearns Rd., Fairfield, Qland. Many modellers in New Zealand use S scale equipment for working in SN3½, and for further information on their excellent efforts, we refer you to the "Stoker", published by the Auckland Metropolitan Model Railway Club, and available at some hobby shops in Australia. Subscription may be made to the Club, at P.O. Box 5883 Auckland, N. Z. for regular delivery of this magazine, at 15/- (\$1.50) per annum.

Q.: One of my Tri-ang locomotives runs in the opposite way to all the others for a given setting of the controller; can this be easily remedied? R.B.G.

A.: Yes, certainly. The lead from the wheel pick up goes to the right hand brush, that is the insulated one, on the motor, and the right hand side, is the right hand of a person standing in front of a locomotive with his back to the engine. Perhaps at some time the other brush has been made the insulated one, and if so, by simply changing over, you will achieve correct running in relation to track polarity and the controller. However unless you are quite competent to change the actual magnet, we advise you not to attempt the correction by this means, because if the magnetic density is disturbed or partially destroyed you will not enjoy good performance from the model. Your Tri-ang Railways Instruction and Information Manual packed with locomotives and sets, will make this clear from the illustrations, on pages 9 & 10.

Q.: Many of my friends seem to feel that reverse loops are not practicable in two rail. Would you comment please? R.L.

A.: Reverse loops are entirely practicable in two rail, although obviously certain precautions must be taken to avoid a permanent short circuit. If you are using proprietary equipment, such as Fleischmann, you will find full instructions are available, together with lists of cata-

logue items, and if you are using for example flexible track with Shinohara points, the methods outlined in proprietary manuals may be applied. We hope in the next issue of the A.M.R.M. to discuss reverse loops at greater length, having full regard for both live and dead frog points.

Q.: I am greatly impressed by the free running of rolling stock, such as Liliput, fitted with needle point bearings. Would you advise me to fit all my rolling stock with pointed axles? L.T.M.

A.: Such a decision can only be made by yourself, as the results depend so much on your ability to make the conversions. Certainly free running stock is a wonderful asset, but as there is such a variety of side frames, bolsters, journals, and axle types in the model field, almost every item, very definitely each brand, will have to be approached with regard to its peculiarities. We draw your attention to the N.M.R.A. Recommended Practice no. 24.1 for the Type 1 axle and journal, which gives full measurements for HO, and also two Notes with particular regard to pointed axles. The European Standards for pointed axles, while similar, are not the same as the N.M.R.A. Recommended Practice, and there are no B.R.M.S.B. Standards for them; it might be very wise to standardise all your equipment to N.M.R.A. RP 24.1. Meantime, make sure you are getting the best from your present set-up by checking for lubrication, excessive flange mud etc.

Q.: Locomotives often stall when passing over the Mimic road/rail section, Junction Type 'B', catalogue no. RM 918. Can you offer any assistance to remedy this? T.M.U.

A.: The actual train rail sections on this unit are so spaced, that the Tri-ang loco with even the shortest wheel base, R.355 (Connie), is on both sections at once, only just on them, but nevertheless sufficiently on them to ensure wheel pick up. The loco. pick up tabs must be suspect, but also it is possible that the flange plates which are spring loaded so that the wheels of road vehicles do not foul in the train track flangeways, are excessively sprung, so lifting the whole loco. bodily on that side. You can adjust the spring loading of the flange plates so that cars and trucks do NOT depress them, but locomotives will; light rolling stock will not depress the flange plates, but as the wheels on the other side, are guided by the road section, in what amounts to another flangeway, this will not matter. (Road/rail crossings in real life are often pretty rough aren't they?). You will find two spring arms under the road section which support the moving flange plates, and these are easy to alter.

Q.: Do Superquick buildings require any additional bracing to avoid warping in humid climate? G.W.C.

A.: Provided you follow the instructions correctly, these buildings require no additional bracing in the majority of cases. We have heard of a few failures in localities where saline humidity has been severe, but the fine salt deposit may possibly have caused deliquescence, as well over a period, and coastal dwellers, particularly those on the Eastern coast of Australia, who have also a southerly aspect will know that conditions are severe in such cases, whether it be Superquick kits or car mudguards! If the buildings of any brand or type are going to receive rougher than average use, say on an exhibition portable layout, it will be sound insurance to add internal bracing. A few aero modelers' hardwood strips are ideal for this job, and in summer keep the ice cream sticks.

Q.: I have converted my Marklin layout and locomotives to operate on direct current, as I thought that reversing by polarity change would suit me better, and also I could then use Dublo three rail locos., by fitting shoes for pick up. However when running trains in opposite directions I sometimes get mysterious dead track sections, and short circuits. Can you explain this? P.W.

A.: With your original Marklin system, being operated solely by A.C. you had in a sense no concern over polarity of the current. This meant that the whole track base could act as a common return for all components as well as traction current, and blocks could be created by placing an insulating tab between centre rail joiners or by using a special rail section. Now that you have introduced direct current, it may be that you are feeding to the track base, i.e. the running rails, both positive and negative from the one secondary winding and rectifier of the transformer. A little reflection will prove to you, that in certain circumstances you are really joining the two direct current outputs from your power pack, through the resistance controllers, and it could even be that they could be joined direct from one track feed to the other. The remedy is to not only insulate the centre spring tabs but the track base as well, and for Marklin track, Peco nylon rail joiners would be ideal.

Q.: I seem to have the impression that the only way I can enjoy good running of model trains is to have everything to N.M.R.A. Standards. Could you comment please? G.H.W.

A.: N.M.R.A. Standards are the most comprehensive in the world, and if your equipment conforms to these Standards, you will be assured of good performance

and operation. However there are other standards such as those compiled by the British Railway Modellers' Standards Bureau, M.O.R.O.P. and so on. The point is that certain combinations are not compatible, and this is most noticeable in wheel flange sizes and contours, and track-work. Additionally certain companies produce equipment, that, while compatible in their own range, are not always compatible with any others. The facet of model railroading, where compatibility is essential, is the relationship of flange sizes and contours and the back to back spacing of the wheels, in relation to the wing and check rail placement, over point-work. There are, of course, many other aspects, but this is the most basic, and the one where most beginners come to grief. If you study the N.M.R.A. Recommended Practice no. 6 — you get these R.P.'s as well when you join N.M.R.A. — you will then appreciate the importance of all this.

their Streamline range and will be in the future, aims to be a compromise to allow modellers with mixed bags of locos and rolling stock to pass through the point. If you only have locos and rolling stock with N.M.R.A. standard wheels then, although they will go through the Peco Points, they will run using their treads only (and not their flanges to run on) through points built to finer tolerances, and without filled-in frog flange-ways.

We regret any misunderstanding on this matter, because for Peco products we have the highest regard, and it is impossible to achieve the status of Britain's second largest model railway manufacturer unless products being turned out do suit a majority of modellers. It is understood that the Mark II Points, will only have frog tips of plastic, and that contacts will be better.

The points will be reviewed by our review editor when they are available in Australia in quantity so that a 'sample at random' can be chosen, as being a fair sample of an average product. The practice of examining advance samples can be unfair to both modellers and manufacturer, please note.

PLEASE NOTE

Reference in the April/May issue of this magazine to Peco Points being of less use to the Scale Modeller than are others, was not meant to imply what it may have looked like. Reference to Scale Modeller in this meant a modeller whose locos and rolling stock were all to the standards of the National Model Railroad Association, and of course in Australia most modellers run locos and rolling stock made in Britain, on the Continent, in Japan and the U.S.A., whilst some lines are also made in Australia, so that a point such as Peco have been making in

BALLOT

S.C.R. members are advised that the recent ballot on amendments to the Constitution resulted in both amendments being passed.

Ralph M. Thomas,
Secretary, S.C.R.



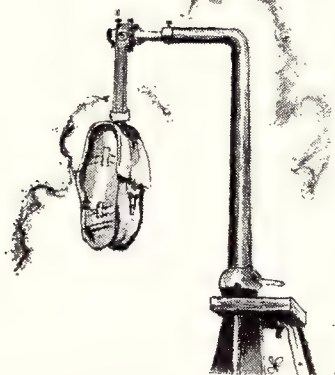
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MAIL BAG



Sir,

On reading through the April/May 1965 edition of The Australasian Model Railroad Magazine, I would like to draw your attention to two captions in the scenic route. No. 1 is the details of the photograph showing PHG Brake Van and the loco is D59 class which has a wheel arrangement 2-8-2 Mikado, and is not a 4-6-2 as stated. No. 2 is the photograph showing two 70 class Diesel Hydraulic switching locos at work in Albury Goods Yard.

The 70 class is New South Wales Government Railway loco and not Victorian Railways as listed.

Trust you will find this information helpful.

—D.W. PEARSON

Guildford, N.S.W.

Sir,

I would like to make a few comments on modelling N.S.W.G.R. trains (Helper Service, April/May). I have found that a Tri-ang "Princess" can easily be modified to make a passable representation of a "C38 Class", the 0-6-0 3F loco is near enough to pass as a "C19 Class". Also the Tri-ang Diesel Switcher is, if one looks closely enough, a "C40 Class" in the wrong livery.

However, I have found that rolling stock is best built from scratch, although modifications can be carried out on commercial bodies. Even if you don't want to do this, you can still run most commercial rolling stock, and it will pass quite well. I hope this will help any despairing modeller of N.S.W.G.R.

—D. WHITE

Yagoona, N.S.W.

Sir,

While reading April/May issue of the A.M.R.M. I noticed two mistakes in the Scenic Route captions. These were:— (1) The N.S.W.G.R. D59 class is a 4-6-2, this should read 2-8-2, they are the only Mikado's on the system. (2) The Diesel Hydraulic shunters in Albury Goods Yard are N.S.W.G.R. "70" class and not Victorian Railways as stated.

Hoping these mistakes were only to test readers' reactions, I would now like to congratulate you on a fine magazine, and the job you are doing in producing a local magazine.

—WARREN WILLIAMS

Canley Vale, N.S.W.

Sir,

"T.H." has requested Helper Service re obtaining American TT equipment. Titcher's of Dandenong did have Kemtron trucks and loco fittings. So far as I know he still has them or will get them if re-

quested. A Kemtron catalogue, available from Titcher will indicate parts available.

Other items such as the HP range were available from Piccadilly Hobbies in Brisbane. They had vehicle kits and, I think, some locos. As they don't reply to letters (even with a reply paid envelope included) I can't say what may be available these days.

I have had no trouble importing direct from manufacturers, even with locos. Bank drafts are easy to obtain and even if customs duty has to be paid, direct imports are far cheaper than most prices in the shops.

The best source of news on what's available from the U.S. is a little magazine called "TT Today" at \$2.50 per year from Bill Christoph, P.O. Box 306, Clarksville, Tennessee, U.S.A. It is published monthly, and shows most new items available in TT. Incidentally, N.M.R.A. recently ran a survey of TT gaugers to try to determine who wanted what. One result of this is the North Eastern clerestory roof stock and car floors in TT which were recently introduced. It looks as if car sidings, complete with belt rail will appear soon.

I am convinced that there is plenty of U.S. TT equipment etc., available and the problem is to get on to the source of supply. The little magazine solves this problem. Incidentally, I work on \$2.00 to the £A1 but the actual conversion depends on the current rate when the draft is requested from the bank. All one needs is the name of the firm to be paid and the U.S. amount. The bank does the rest.

—JIM BLANEY

Glen Waverley, Vic.

Sir,

In reference to your current publication, in Helper Service, you mentioned that shim brass is not available in less than .005". In Newcastle we have no trouble in getting .002", .004", .0006" and .008" at Thomas McPherson's.

In your centre spread, as you probably know by now, there are a couple of mistakes. Firstly, the "Pacific" in the top left hand photo is actually a 2-8-2 Mikado; secondly, the two "Victorian Railways" shunters in the bottom centre photo are actually N.S.W.G.R. 70 class diesel hydraulic shunters used almost exclusively at Port Kembla, N.S.W.

—R.G. BEATH

Kotara South, N.S.W.

(Ed Note: We have inquired from the Sydney store of Thomas McPherson and they do not stock the smaller thicknesses of shim brass. Readers requiring these small sizes should write to the Newcastle branch.)

Sir,

I enjoy reading your model magazine.

I am 11 and operate some HO equipment. I am sending you part of my negative file showing locos in the yard at Enfield, N.S.W. These show some excellent shots of the "graveyard" at Enfield with some close-ups of locos which could give good reference for scratch builders. Can I become a member of N.M.R.A.? Why don't you put a notice in every issue of the magazine explaining how to join and showing benefits. Mr. Thomas' letter complains about lack of members. A notice to the public, as I suggest, should help.

—MARK HARDACRE

Cammeray, N.S.W.

(Ed.: We are forwarding an application form to you so that you can join N.M.R.A. Your suggestion about a notice

in every issue has been adopted. Thank you for your excellent idea.)

Sir,

I noticed in the April/May 1965 issue of A.M.R.M. that in the article entitled "Watts" the writer has written the answers of the resistance equations as 150r and 250r respectively. Shouldn't this read 150 ohms and 250 ohms respectively? Also in the same article it seems to me that the writer has taken for granted that electromotive force in the same as voltage. This is not entirely so as e.m.f. is the origin of the current and is described in volts, e.g. 6 volt battery. The battery has a +ve and -ve terminal and the potential difference (p.d.) between these is 6 volts which is the voltage going through the circuit.

Also in this issue in Mailbag Mr. Thomas said that "No sensible person could reasonably suggest that an amount of £2-18-0 per year is excessive for the fellowship of N.M.R.A. alone, let alone the fundamental benefits of Data Sheets and so on..." I think I could be talking for a fair few model railroaders when I ask for what purpose, on what subject, are these sheets issued for and when are they issued? What other benefits do members receive from N.M.R.A.?

Is it possible for the subscription staff to speed up the postage of the issues? I get mine at the end of the second month of the issue i.e. I receive the latest (April/May 1965) issue today, May 29 and by this time it is a little late to attend meetings etc. during May, as advertised in the magazine.

Having got the chip off my shoulder I will congratulate the staff on a good, helpful and interest filled magazine.

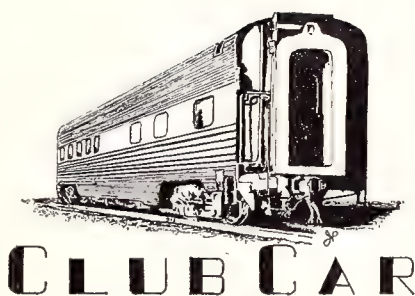
—JOHN HALL

Kyneton, Victoria

(Ed. Note: The author replies thus— (1) 150r and 250r had to be printed this way because our linotype contractor did not possess a symbol for "ohm". We will try to rectify this in future issues.—(2) The aim of the article was to give a brief basic understanding of fundamentals and if all terms had been explained in full the article would have defeated its purpose.

Re N.M.R.A. benefits: Approximately three months after joining members of the Southern Cross Region of N.M.R.A. receive a year book, which lists all members of the association, with their addresses and pike details and a membership certificate. During each year they receive data sheets, an annual periodical index, a copy of the standards and each month a copy of the N.M.R.A. bulletin which contains news of association activities. Every two months a copy is received of the Australasian Model Railroad Magazine. At intervals reports are given of the activities of the conformance committee which checks the model railway products found on your hobby shop shelves for conformance to the official N.M.R.A. standards.

Re delay in posting magazine: We try to have each issue in the mail by the first day of the second month of issue. That is, the April/May issue should have been posted on the first of May. This is not always possible. See editorial this issue. If clubs and associations could give more advance notice of meetings your problem would not arise.)



CLUB CAR

To Club Officers: These pages are available for the dissemination of news about your societies. Brief news about activities will be welcome for these pages. Closing date is fifteenth of month prior to month of issue.

N.M.R.A. ACTIVITIES Southern Division

The March meeting saw an exodus to Sorrento, families and all to visit Wally Kennewell, and after exploring a somewhat windy beach, we adjourned to Wally's layout and spent a hectic afternoon of 'organised chaos' operating (?) on the extensive set up in Wally's garage.

Over cups of tea we discussed such matters as the convention, dues, future meetings (always thorny) and arranged to hold another modelling competition, to be judged in July. This time we chose a caboose, brake van, call-it-what-you-will. Many thanks to A.M.R.M. for its publication of plans of a Z-van which may even lead to a resurgent interest in local prototypes.

In April, in lieu of convention bustle, we chose an extremely windy and cold day to visit the Newport museum and browse nostalgically amongst the locos and carriages, but the weather was against us and attendance was very poor.

The meeting in May was hosted by Jim Blaney and the exquisite detail which attends all Jim's work was admired by all. Tea again brought forth discussion on subjects varying from dues (again), finance and accommodation.

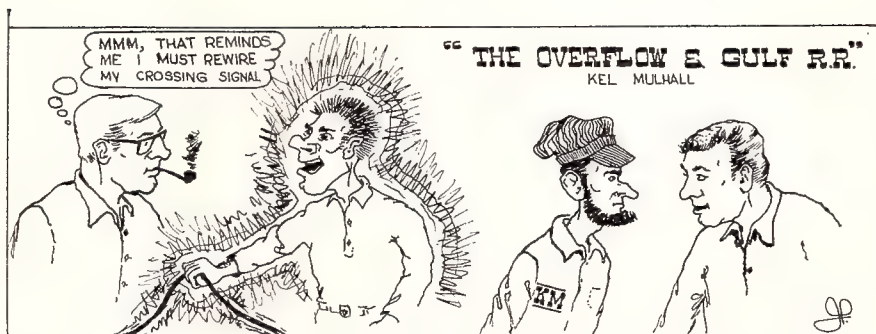
The finance problem has been a source of worry for some time, postage being a big drain, so we decided that we would insert an advertisement in the 'Public Notices' section of 'The Age' on the last Monday in each month, advising the venue of the next meeting. The usual advices will be sent to Div. Reps. etc. each month as usual.

Two offers of accommodation were discussed but deferred for further inquiry of the financial side. John Henshaw, one of our newer members, invited us to visit his HO_{N3} layout on June 12. July 10 will see us at Laurie Jackson's, again an HO_{N3} layout (still being built). His new 24' x 12' garage should be useful sooner or later.

A visit to 'Puffing Billy' at Belgrave is envisaged as well as an 'open' building competition to be judged in December.

Central Division

The April meeting was at Peter Letheby's home and he had some of his models on display. These included an NYC Niagara and a Tenshodo, French prototype mountain class, Bob Footner brought along his NYC Hudson which he has super detailed, including brakes



"The old Pete is certainly a live wire tonight"

and a working reversing valve gear. L. Opie showed a beautifully detailed loco of the Japanese National Railways 2-6-0.

The layout committee and members passed a vote of thanks to members who gave so much of their time to the layout exhibition.

Thanks were extended to Mal Wallace for his efforts, to Malcolm Bastian for the use of his portable layout, to William Spraggett for the use of his shed, to Len Opie for the loan of twelve Crown freight cars, and to Bob Footner for working on the layout during his holidays.

The meeting also discussed the possible acquisition of a shed which is suitable for use as a club house. It was suggested that this could be located at Edwardstown.

John Liebelt brought along his collection of passes. This is a fascinating sideline to Model Railroading and is an interesting way of making contact with model rails around the world.

The May meeting at R. Gillies' home was a successful evening. The business of the evening was a lengthy discussion of correspondence relative to the executive committee meeting, and also members' views on the chances of setting up a club house with a view to making a permanent home for a club layout.

In the train room we were treated to a running display of some S.A.R. type models representing local freight and a Tailembend Local which Bob has scratch built.

Advance Notice of Meetings: July 14th, W. Spraggett, 90 Narinna Ave., Cumberland Park; August 11th, N. Mercer, 2 Paul St., St. Mary's.

OTHER CLUBS

NEW ZEALAND MODEL RAILROAD ASSOCIATION. Secretary: C.I. Bradley, P.O. Box 108, Wellington C.I., New Zealand.

The 17th Annual General Meeting of the above Association was held in Wellington on the 10th of April, 1965. The following were elected to executive positions on the Management Committee: President, M. Duston; Treasurer & Editor, I. T. G. Johnstone; Secretary, C. I. Bradley.

The President reported that good progress had been made in the previous year with satisfactory increases in membership and the financial position consolidated. For 1965 the President forecast further improvements to "The New Zealand Model Railway Journal" and to the plan service.

The news of the year, however, is the holding of a National Model Railway Convention in Wellington over Easter 1966. This will be open to all model rails be they members of the Association or not. Plans for the convention include — layout visits, draw bar contests, convention dinner, live steam meet, etc.

Readers will be kept posted on the convention by the "Convention Newsletter" which we hope to issue regularly between now and the convention. Any prospective conventioners are invited to write for the free Newsletter.

WOLLONGONG MODEL RAILROAD CLUB.

Secretary: J. K. Coughlan, Lot 36 Sheppard Street, West Wollongong.

The W.M.R.C. was formed about three and a half years ago and is in the main 2 rail HO standard gauge with some glimmerings of narrow gauge. Like most clubs we originally operated from house to house each month which, while workable, left a lot to be desired.

About 18 months ago we were fortunate in securing the use of a large shed 40' x 24' from the father of one of our junior members for a very reasonable rent. Connecting electricity proved a longer job than anticipated, taking about nine months.

The club meets every Thursday night and just about every Saturday morning to do construction work. The clubroom is available to members seven days a week. Business meetings are kept to a minimum. We must admit most business is conducted above the clatter of hammers, electric saws and the like.

About 150' of mainline is operable and is operated on sectionalised cab control. Visitors are welcome at all times, but are requested to make contact at the above address to ensure that the clubroom will be open if visited outside construction meetings.

CENTRAL COAST MODEL RAILROAD CLUB.

Secretary: L. H. Dodds, 4 Adelaide St., East Gosford, N.S.W.

Members have launched wholeheartedly into the business of altering and improving the two club layouts. As the club has promised to exhibit at the Woy Woy High School fete on the last Saturday in June, and at the Sydney Town Hall on the first weekend in October, the construction task in front of the work force is quite formidable.

The plan is to add another 6 ft. x 4 ft. extension to the existing 12 ft. x 4 ft. However, the work will not be complete for the school fete, but enough modification of the main layout will be operable.

Members are looking forward to Harry Doherty's return from holidays, as his work is of great value at these times. No doubt Harry will have added some more railway slides to his collection this time, both in respect of still and movie, as he took his photographic equipment away with him.

Every Thursday night until the work is completed, members are invited to come along and lend a hand with both tools and enthusiasm. Those who do not feel like helping should keep away; but that will be their loss, as everyone can

Continued p. 26

CLUB CAR (Cont.)

benefit from the experience of carrying out this work. Juniors should not think they are left out. They are needed to work on their layout, and it is hoped to have a junior layout in Sydney.

Club funds are growing steadily, as members are co-operating with the new collection system. However, the reconstruction programme will draw on club finances, but if there is no expenditure there is no progress.

Next month will see the Central Coast Model Railway Club reach the conclusion of its third year of activities. This shows that model railroading is a hobby that can endure when it is approached in the right manner. The interest of railroading is never finished to the real enthusiast.

ILLAWARRA MODEL RAILROAD ASSOCIATION. Secretary: H. Simpson, 77 Willcath St., Bulli, N.S.W.

A general meeting was held in our room at the Wollongong Police Boys' Club, with which we are closely affiliated, to elect officers for the coming year as follows: President: B. Carson; Secretary: H. Simpson; Treasurer: M. Spears; Publicity Officer: R. Ingram; Editor: T. Jones.

This association is now in its second year.

The association is now able to give its members the best fringe benefits possible, and does not have to pay for any light, power or rent. Therefore, all finances are available to facilitate amenities for its members.

Two layouts are operated; one is 8 ft. x 4 ft., three rail, and the other is 11 ft. x 6 ft., two rail. Both are fully scenicked. A completely universal track is now possible. Both layouts are HO.

Among its members are some from one of the largest model railway clubs in Germany who are available as supervisors for scenery, electrical engineers for wiring systems and carpenters.

Meetings are held each Monday and Thursday nights from 7.30 p.m. to 9.30 p.m. Fees are 2/- per month or 6d per visit. We are available for exhibitions for charitable organisations.



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12 words for 2/6. Extra words 2d. ea.
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MODEL RAILWAY NEWS, for July 62, RAILWAY MODELLER, for April 61, July 62, September 62. Full Prices Paid, Editor AMRM, 189 HOMER ST., EARLWOOD, N.S.W. Phone 55-6886.

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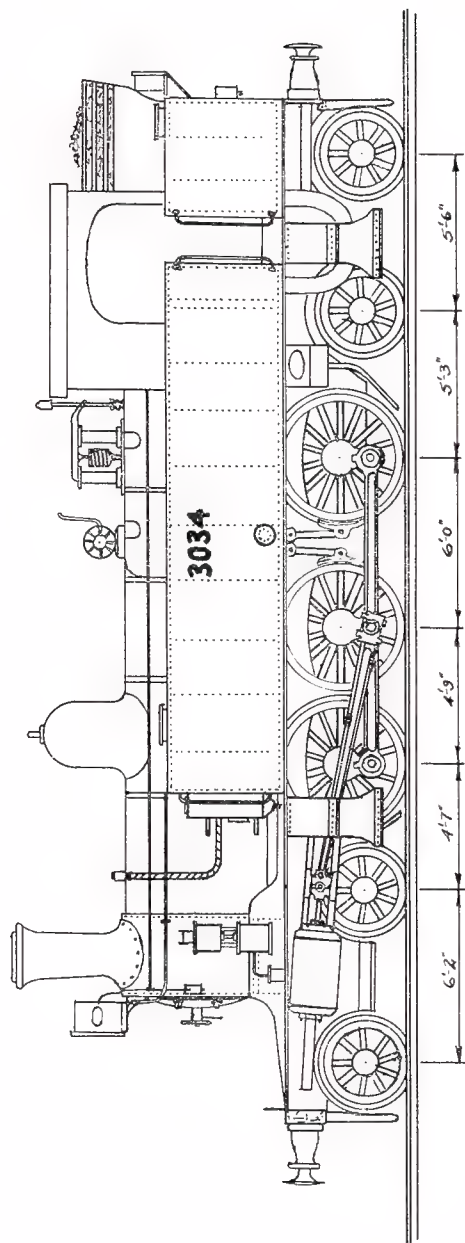
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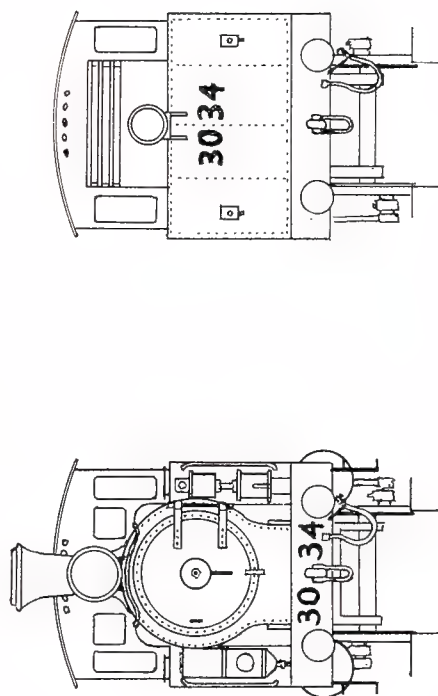
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Between 1903 and 1917 one hundred and forty-five of these locomotives were built to take over the whole of the extensive suburban working of Sydney. Following electrification some were considered surplus but many were used in outer suburban areas and are still in use on non-electrified lines. Our plan appears opposite.



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Cylinders	2/18 1/2" x 24"
Coupled Wheels	55" dia
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Weight	72.16 Tons
Coal	3 Tons
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N.S.W.G.R.

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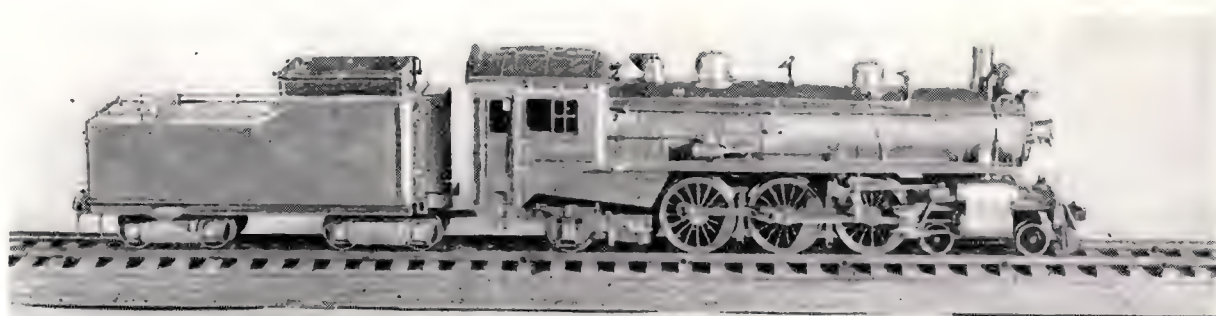
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SPECIALS



Box Cab Electric Penn. or G.N.

powered by two heavy duty motors, all brass construction were £33-15-0 now only £20-0-0.



Our other special of the month, the Canadian Pacific 4-6-2. This beautiful model has all sprung drivers and is powered by a heavy duty K.T.M. motor, was £29-15-0 now at the sale price of £20-0-0.

Other Models that are available

S.P. AC-9 2-8-8-4, VGN. 2-6-6-6 Articulateds £84-0-0 each. C&O Class J2 4-8-2 Mountain £49-10-0, C&O 4-6-4 £39-15-0 N.P. 2-8-0 £29-15-0, B&O P-7 4-6-2 £29-15-0, U.S.R.A. 0-8-0 **Now Available from United.** USRA light 2-8-2 £36-11-3 C&O Class "H" 2-6-6-2 £58-10-0, ATSF 4-6-4 Hudson £35-0-0 S.P. 4-6-0 HON3, ATSF 2-8-0 £29-5-0, S.P. 4-6-2 P-5 £33-0-0 D&RGW "K" 27 HON3 2-8-2, D&RGW "K" 28 HON3 2-8-2 £43-17-6 H.O. Standard Passenger car set less trucks £33-0-0. These models are in small quantities, so order your choice now and avoid disappointment.

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AUG./SEPT., 1965

Vol. 2, No. 15

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of N.M.R.A.



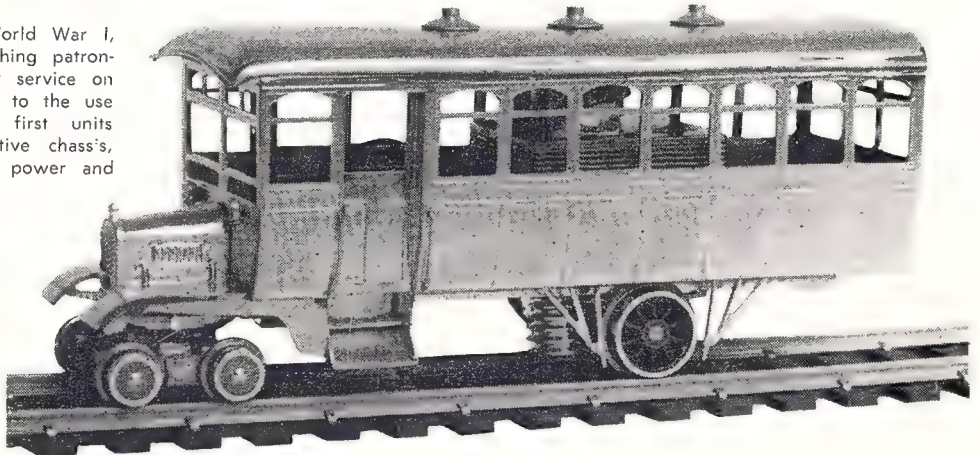
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BRILL RAIL-BUS

Around about the outbreak of World War I, many railways, faced with diminishing patronage and rising costs of passenger service on branch line and local runs, turned to the use of self-propelled rail cars. The first units being built on converted automotive chassis, with direct drive, whilst capacity, power and refinement came later with the development of petrol-electric transmission.

Logically interested in this field, J. G. Brill and Co., of Philadelphia, U.S.A., the world's largest electric railway car builders, were amongst the first to offer suitable products. Body construction — closely following current tram-car design of the day, with curved side panels and divided upper sash.



In selecting one of these original type 'motor cars' for production in HO Gauge, Kumata have wisely chosen a classic from Brill records. A 1921 model constructed for a number of roads, as well as for the U.S. Army. Finely executed, with etched brass body, embossed radiator and diminutive leading bogie, the model has doors arranged for both left and right-hand running. Measuring 3½" overall, the Rail Motor comes unpainted, ready-to-run. Price: £7.19.6.

BRILL GAS- ELECTRIC



At the opposite end of the scale, in the late 1920's Brill's Model No. 350 appeared. A 75' double ended petrol-electric combination car, amongst the largest, heaviest and most powerful 'gas-electrics' ever built.

A full 75 scale feet in length over buffer plates and yet capable of negotiating a minimum radius curve of 10", Kumata's model shows close adherence to the massive lines of the prototype. Equipped with a powerful 5 pole motor geared to both axles of one truck, this Rail Motor has long been a firm favourite with model railroaders, due to its versatile application on the average HO layout and ability to run as a 'train' or handle a trailing load, be it mixed or otherwise. Unpainted, ready-to-run. Price, £19.17.6.

Other News from 'THE DOCKYARD' ...

Although reflecting increased prices in the U.S.A., fresh stocks from Central Valley are welcome and include the following lines: T-21, 6 Wheel Riveted Pedestal Passenger Truck at 37/- per pair; T-22, 6 Wheel Cast Pedestal Passenger Truck at 37/- per pair; T-25, 4 Wheel Riveted Pedestal Passenger Truck at 31/6 per pair; T-31, 4 Wheel Standard Pedestal Passenger Truck at 31/6 per pair; T-39, 4 Wheel Streamlined Pedestal Passenger Truck at 21/- per pair; T-51, Fox Rigid Frame Truck at 21/- per pair; T-52, Fox Swing Motion Truck at 21/- per pair; T-53, Archbar Truck at 14/3 per pair; T-54, HOn3 Archbar Truck at 19/- per pair; T-55, Bettendorf Truck at 17/- per pair; T-56, Roller Bearing Freight Truck at 17/- per pair; T-57, High Speed Roller Bearing Freight Truck at 17/- per pair; K-23, Snap-on King Pins for 6 wheel trucks at 5/6 per pair and K-25, Snap-

on King Pins for 4 wheel trucks at 5/6 per pair.

Unaltered, the Disc Wheels remain at the same prices as before and comprise: 36", 2/11 per pair; 33", 2/6 per pair and 26", HOn3 gauge, 2/6 per pair...

Fishplates, in nickel silver, are now available to suit our HOn3 Track at 2/- per dozen. See your nearest stockist for supplies... The new 1964/65 Faller Catalogue is now in at 3/9 per copy, along with good stocks of almost all structures and other railway items in the range...

'Dockyard' have long maintained the full Hornby 'O' and Dublo range, as well as that by Triang in OO and TT scales. However, with the take-over of Meccano Ltd. by Triang, it is now clear that the days of Hornby and Dublo railway products are numbered.

Many of our keenest enthusiasts commenced

with Hornby trains, whilst others have relied upon Hornby and particularly the Dublo range, to equip growing layouts.

'Dockyard' will continue to stock the full Hornby 'O' and Dublo range as long as it remains practicable to do so, though it is already clear that stocks will commence to diminish before this appears in print. Undoubtedly, many will regret to see the passing of the fine name "Hornby Trains"...

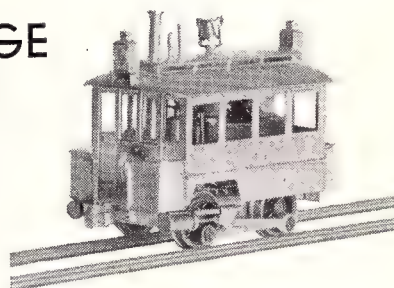
'O' gaugers requiring a fine Vignoles section rail and correct appearance which only sheradised steel can give, will welcome further stocks of Rocket Model Co. Rail now to hand from the U.K. Off the market for years and now especially produced for 'Dockyard', price remains at 2/6 per yard...

With first stocks of the new Sprinkler Car, Kumata are shipping three other new and extremely interesting items for the

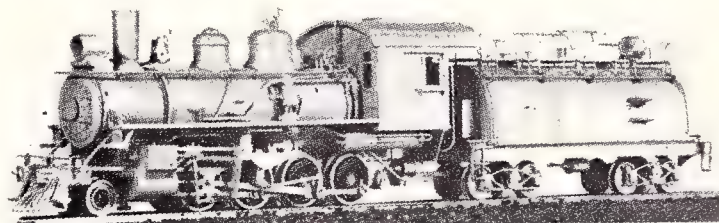
KUMATA INTRODUCES...

THREE NEW ITEMS FOR HO_{n3} GAUGE A BRILL CENTRIFUGAL SPRINKLER ... AND MORE!

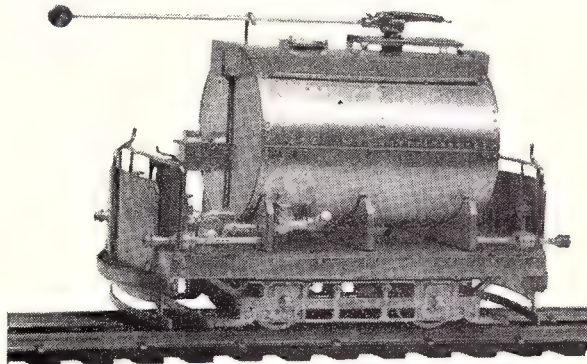
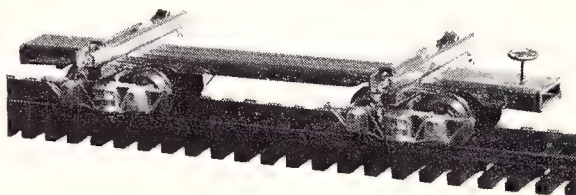
HO_{n3} 0-4-0 STEAM MOTOR: Many an enclosed engine found a new lease of life for logging, branch and industrial service, after electrification ousted the tram loco. from city streets. A fitting companion to the HO version already reviewed in these pages, this HO_{n3} Motor is now available at the same keen price of £7.12.6.



HO_{n3} S.P. No. 1 2-8-0: Following on the success of the relatively low priced "Slim Princess" made up for West Side Model Co. (U.S.A.) some months ago, this Consolidation follows to offer the average narrow gauger a reasonably large road locomotive at an economic figure. Well detailed and fitted with distinctive 'haystack' type tender. Price: £24.15.6.



HO_{n3} LOGGING CAR: Of skeleton type, this 'log buggy' is finely detailed with etched brass centre sill, built in draft boxes and special logging road trucks. Detail even includes sliding bolster wedges and working chains. Price, 35/6.



HO BRILL CENTRIFUGAL SPRINKLER: A stock model from the Brill plant, this single truck Sprinkler was designed to lay the dust on unpaved streets, being capable of delivering jets of water up to 35 feet either side of track, by means of a 20 h.p. pump mounted on the extended platform. Finely detailed and mounted on Brill type 21E truck, the model is provided with insulated trolley base, enabling optional working from overhead line. Price, £8.19.6.

Other News from 'THE DOCKYARD' (Cont.)

growing band of HO traction enthusiasts: The New Orleans 800 series Car, a double truck saloon of typical 1920/30 vintage at £10-19-6; the Toronto double truck 'Peter Witt' Car at £12-15-0 and a very limited number of 'North Shore' four-car articulated 'Electroliner' at £33-19-6...

Fresh Pocher stocks include the new V. & T. 4-4-0 "GENOA" Loco. at £15-18-6... To hand from 'United' are more U.P. 2-8-0 at £30 and S.F. 2-8-0 at £26-10-0. By the time this appears in print 'United' will have delivered the new Frisco 2-10-0 at £33-10-0, more B-2 Shay at £36-10-0 and first stocks of B-3 Shay at £39-13-0.

To follow will be the long sought HO_{n3} C. & S. 2-6-0 and 2-8-0 Locomotives at £25 and £26-5-0, respectively. Also the new D.M. & I.R. 0-10-2 at £46-13-0 and

more Ma. & Pa. 2-8-0 at £24-15-0... Scale type E knuckle couplers, with actual operating pin actuated jaw, have long been manufactured for 'O' gaugers, by 'Monarch', in the U.S.A. Now 'Dockyard' have full stocks and the range comprises as follows: Automatic, top operating, 15/9 per pair; Automatic, ramp operating, 15/9 per pair; Automatic, bottom operating, 15/9 per pair and Solid Jaw, 4/- per pair.

Release Bars, either top or bottom operating, 2/- per pair. Also available are formed brass Grab Irons, both 3/8" Straight and 2" Depressed types, at 1/6 per dz... Also for 'King Gauge' enthusiasts, Pittman have delivered first stock of their new DC106 Heavy Duty Traction Motor, with double extended shaft, at £5-13-0.

More DC204A Underfloor Motor Truck

Set (not insulated for 2 rail) are also to hand at £9-19-6... Amongst the finest in HO_{n3}, Balboa's line of freight car kits are now in stock as follows: D. & R.G.W. "3000" series Box Car, 54/-; D. & R.G.W. Gondola, 38/-; D. & R.G.W. 30' Reefer, 50/-; C. & S. 30' Reefer, 50/- and R.G.S. 30' Reefer, 50/-.

Also available, but too extensive to list fully herein, are the full range of Balboa's excellent 'lost wax' old time HO_{n3} car hardware sets...

STOP PRESS: Coming shortly from Japan are the following new products—HO N.Y.C. H10-b 2-8-2 Loco. (L.M.B. Models) at £32-15-6; HO_{n3} 2-6-6 Mason Bogie Loco. (Balboa) at £30-17-6, and HO_{n3} 4 Car Brass Passenger Set (Balboa) at £33-9-6.

For Australia's Largest Model Railway Range!...

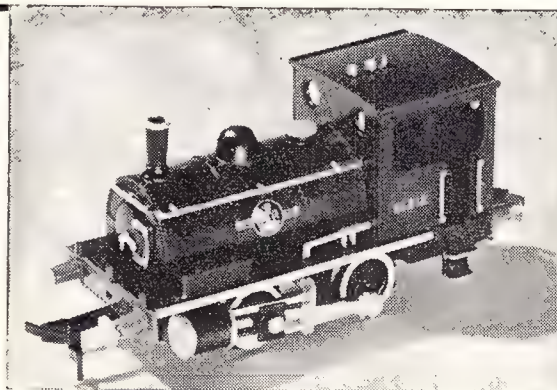
The MODEL DOCKYARD Pty. Ltd.

SOLE AGENT AND IMPORTER

216-218 SWANSTON STREET, MELBOURNE C.1.

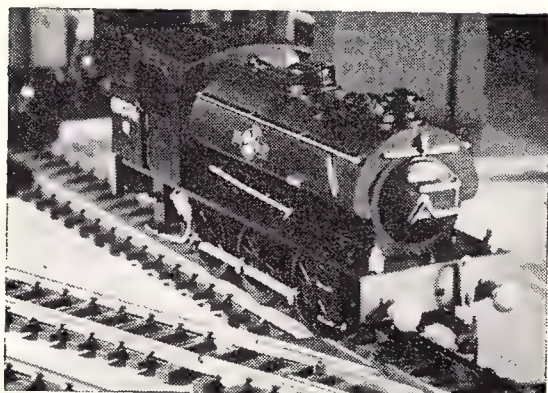
32 3505

ADD TRACKSIDE REALISM WITH **AIRFIX** STATIC LOCOMOTIVES

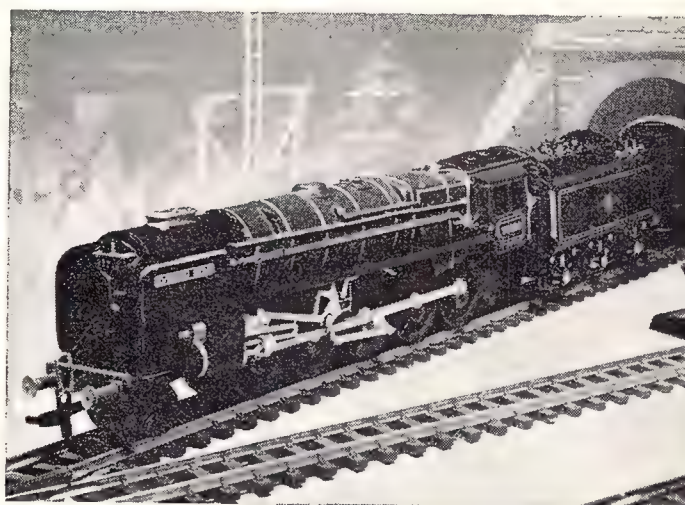


AIRFIX R 9 SADDLE TANK 0-4-0, 5/9

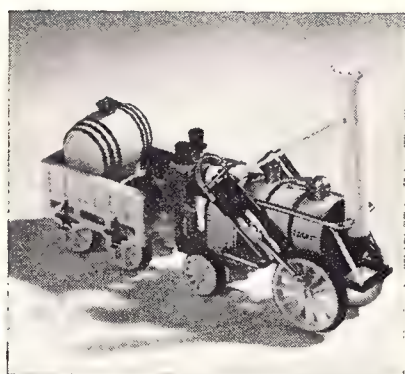
Illustrated are a few of the many Airfix Locomotives available, most of which can be motorised.



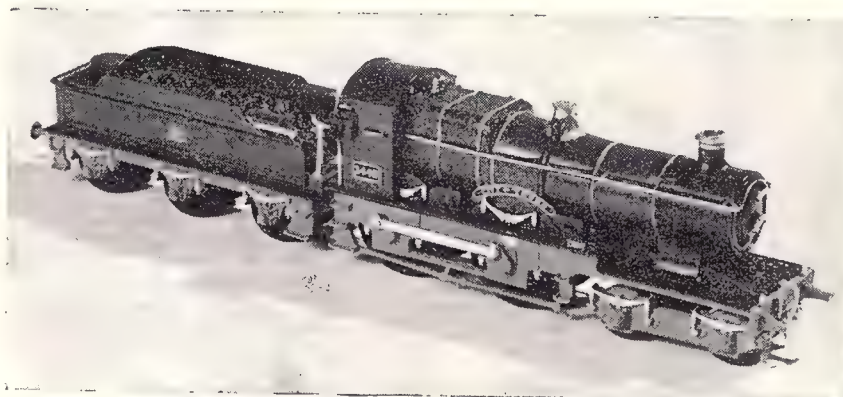
AIRFIX R 205 SADDLE TANK 0-6-0, 8/-



AIRFIX R 401 EVENING STAR, 15/9



AIRFIX R 11 STEPHENSONS
ROCKET, 5/9



★ NEW AIRFIX R 302 CITY OF TRURO, 12/3

AIRFIX Available from Newsagents, Toy & Hobby Shops

TRADE ENQUIRIES: TRADING CO. PTY. LTD., 38-48 Marshall St., Surry Hills, N.S.W.

THE AUSTRALASIAN MODEL RAILROAD MAGAZINE

Vol. 2, No. 15, August/September, 1965

Incorporating **THE BOOSTER**

THE OFFICIAL JOURNAL OF THE SOUTHERN CROSS REGION OF N.M.R.A.
Also THE YARDMASTER, The Bulletin of the Sydney Model Railway Society.

AUSTRALIA'S LEADING MODEL RAILROAD MAGAZINE

CONTENTS

VICTORIA'S LOCOMOTIVE MUSEUM, by William C. Fraser	Page 9
A FEW HINTS ON LINING MODELS, by Jack Grierson	10
HAVE FUN WITH HOPPER WAGONS, by Paul Rogers	12
MOUNTAINS OF YESTERYEAR, by Paul Rogers & Howard Armstrong	13
THE WAITARA SHUNT, by David B. Leitch	18

REGULAR FEATURES:

On the Cover	5
Shop Window	6
Market Place	7
Shop Detective	8
Hints	17
Mail Bag	21
Helper Service	23
Club Car	24
Our Plan	14-15 & 27

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ACHIEVEMENT PROGRAM

Have you been in model railroading a while and felt that you've got the hang of most methods regularly written up in model magazines? Are you keen on scratch-building? And have you built up a string of cars of various types with lettering by decals or free-hand? Perhaps you buy ready-to-run equipment and concentrate on the 'real estate' of your layout; scenery, or trackwork, or control wiring may be your specialty.

If you have already tried to do something more than buy a train set and let it run, then you have started to qualify for at least one Achievement Program Certificate.

What is an A.P. Certificate?

Certificates are issued to recognize modelers' abilities in various phases of model railroading. There are 10 recognised phases which can be roughly grouped into: equipment building (3), layout building (4), and club service (3).

For a modeller who can earn 7 of these certificates covering all of the groups, the certificate of Master Model Railroader is awarded. The program has been in force in the N.M.R.A. for four years and not yet have 20 qualified for M.M.R. certificate of the 14,000 members. Many have shown they have the ability to win several certificates.

The A.P. aims to recognise modelers of above average ability by awarding certificates based on their modelling work. It also aims to provide incentive for the average fellow to try something a bit different and learn that nothing's terribly hard if you have a go.

Contact one of the Committee for more gen.:

Brian Marstaeller, 37 Avoca St., Yerronga, Qld.

Basil Hammarsley, 56 Edgbaston Rd., Beverly Hills, NSW.

Jim Blaney, 19 View Rd., Glen Waverley, Vic.

or your Divisional Representative. (See list on contents page).

Coming Next Issue THE MOOSE CREEK LUMBER & MINING COMPANY RAILROAD

John Henshaw tells how he constructed his narrow gauge railroad representing the 1910 era, a railroad with tight curves and impossible grades.

On the Cover...

On Kelvin Woodside's layout Loco No.3, a rebuilt Hornby 0-6-0, brings the day train across the trestle. These are scratch built N. S. W. G. R. prototypes. Watch AMRM for an article on this line.



Plastic Trees

Manufacturer: Britains Ltd. — United Kingdom.



Price: 5/11 to 6/3 depending on type.

These trees are suitable for use with most scales of model rail road layouts. Each tree is moulded from a fairly soft type of plastic. The shape of each tree is adjustable to suit each individual location and taste.

The main trunk and branches are moulded in one piece and is supplied in flat form. First twist the trunk whilst holding the base firmly so that the branches project from the trunk at realistic angles. Then bend individual branches to ensure a natural realism.

Each leaf cluster is fitted to pegs on the branches, starting at the bottom ensuring each spray faces outward.

Varieties available include apple (front left); Young Beech (front right); Scots Pine (centre rear); Silver Birch is also available but not illustrated.

The trees are fairly realistic especially in the background. This is particularly true of the apple, beech and birch, which have fine lace like leaf cluster. I tried dipping each leaf cluster in glue then into green flock with good success as to realism. The beech is in Autumn tones of bronze, the apple tree is pale green with lots of juicy red apples, the scots pine is dark green.

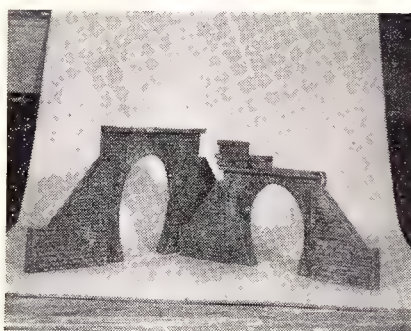
HO Tunnel Mouths

Manufacturer: Gebr Faller — Germany.

Price: Model 558—5/4; 559—8/- each.

These kits are but two of a very large range of plastic model railroad line side

and scenic accessories made by this company. All of these products are of high



quality, however, they for the most part are of European prototype, which can be seen in most countries of the world.

The tunnel mouth kits illustrated could be typical of many built in this country.

Kit 558 suits a single track installation with the reverse side of box printed as brick paper to line the inside of opening. Illustration on right above extra coping stones set above are separate and may be used if required.

Kit 559 has parts to convert to double track operation illustrated on right above. Extra coping also included.

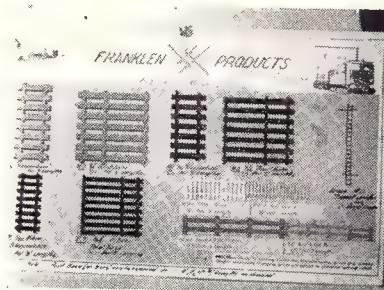
The surplus arch section can be used in conjunction with a second kit to make a very fine viaduct. No brick paper is included.

Both kits are of plastic and realistically coloured, simple to assemble. Opening passes the NMRA track gauge.

HO/TT Fibre Sleeper Base

Manufactured by: Franken Products, 170, Hudson Road, Spotswood, Victoria.

Price: Refer Text below.



There are three basic types of base in the range, each has a matching Point base in the same material. There are two HO sleeper base sections, one in a grey coloured material 1/16 inch thick, the second is coloured black and is cut from 1/32 inch thick fibre board. The cost of the 1/16 inch base is 2/- per 3 foot length for sleeper and 3/3 for point. The 1/32 inch is 2/6 and 3/6 respectively.

In addition to the HO line 1/32 inch thick black base suitable for TT users is available at 2/3 per 3 foot for sleeper and 3/3 for point base.

Other lines illustrated above and made from fibre are two sizes of picket fence. The larger is 3/4 inch tall whilst the other

is 1/2 inch. Although the latter is labelled TT, I feel that is more suited to HO being equivalent to 3'6" high in HO scale. Price is 3/3 and 3/- per 3 foot length. The other fence line is a post and two rail fence, the larger is 5/8 inch high, the other 7/16 inch. price 2/- and 1/9 respectively.

To complete this manufacturer's range is a fine brass HO signal ladder in 4 inch lengths at 9/- per doz. lengths. Other dimensions are 12 scale inch wide with rungs 12 inch apart.

Sentinel HO Loco Fittings

Manufacturer: Indi Enterprises Pty. Ltd. — Albury N.S.W.

Price: See text below.



These well detailed components are but a few of the newer items in the Australian company's range of cast accessories for both locos and rolling stock. All are of good detail and are cast in a soft metal, painted black with mounting spigots. Your hobby shop can supply an illustrated catalogue of the full Sentinel range which consists of 78 items plus trackwork items listed in a separate catalogue.

The items illustrated above are as follows:—

TOP LEFT L — 7B Cross Compound Air Compressor price 2/6 each

TOP RIGHT L — 21B Reversing Cylinder price 4/6 each.

CENTRE L — 3B Pyle type Steam Generator price 1/6 each.

BOTTOM and CENTRE LEFT — Elesco Feedwater Heater Spigotted for front mounting with pump price 10/6 set.

BOTTOM RIGHT — L 12B Pilot/Cow-catcher price 4/- each.

It is recommended that you examine these parts and plan now to improve the look of your locos and rolling stock. Prices are reasonable especially compared with some of the imported lines available.

F7A Diesel Locomotive — HO

Manufacturer: Athearn Inc. — California U.S.A.

Price: £9-0-0 each.

The prototype is from the Electro-Motive Division of G.M.C. and are both road freight and passenger loco. I am not sure just where the F7A fits in the picture. The NRMA data sheets show the F7 as a freight and the F7B a passenger loco. No mention of F7A so I guess its

somewhere in the middle.

The dimensions set out below are of the model inspected and are accurate except for width should be 9'10" and wheel diameter should be 40 inch.



The model is an eight wheel gear drive with nylon gear, double ended motor, plastic universal jointed coupling. Motor has a moulded nylon case with a totally enclosed magnet and has a 5 pole commutator.

The operation is smooth and the weight of the loco ensures maximum pulling power. Unfortunately at present your reviewer has limited facilities due to a house move and I can't give you full running specification of the loco, however, I will print this next issue.

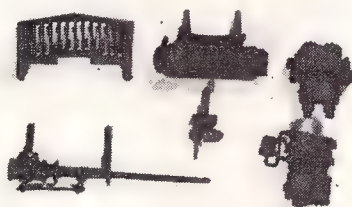
Overall length 50'0"
Overall width 10'6"
Overall height 15'0"
Truck wheel base 9'0"
Loco wheel base 29'0"
Wheel diameter 3'6"
Weight 1 lb. 4 oz.

Cal-Scale HO Brake and Loco Fittings

Manufacturer: Cal-Scale—California—U.S.A.,
Price: See below.

Cal-Scale is one of the two best known US accessory and parts manufacturers.

Most of their products are produced in either brass or plastic. Depicted below are samples of both materials. All brass castings are made by the lost wax method and are very well detailed. Supply is available through a limited number of hobby shops in Australia, refer to advertisements in past issues of this magazine.



TOP — Twelve piece plastic kit of the Westinghouse "KC" Brake set Number AB290, Kit includes layout diagram. This kit used on freight cars price approx. 7/6 per set.

BOTTOM LEFT — Standard Stoker Engine and mounting bracket SE224 Brass lost wax — price approx. 15/- per set.

BOTTOM RIGHT — Mechanical Lubricators and bracket — LU271 Brass lost wax — price approx. 15/- per set.

As you can see these items are considerably dearer than the local counterparts reviewed this month. However, many lines in this range are not available in the local range but where they are the buyer must decide on the degree of quality required plus how much is he prepared to pay.

THE MARKET PLACE

MODEL LOCOMOTIVE Blue Prints, in outline, all classes N.S.W. Railways. Detail Blue Prints for Live Steam, all gauges. Large range, N.S.W. Rolling Stock Prints, Trams, Ships, etc. Bolton, 70-72 King Street, Sydney. Catalogue 7/6.

WANTED

MODEL RAILWAY NEWS, for July 62, **RAILWAY MODELLER**, for April 61, Full Prices Paid, Editor AMRM, 189 HOMER ST., EARLWOOD. N.S.W. Phone 55-6886.

WANTED

NEW OR SECOND HAND HORNBY DUBLO, two and three rail equipment. Any quantity. Details to Box 14, S.C.R. Publications.

TRAIN WATCHERS PLEASE NOTE

Chris Pratten, who supplied last issue's cover picture, advises that the 59 Class Mikado was photographed near Willow Tree on the main Northern Line, not near Borenore.

PLAN NOW!

Visit the NMRA, SCR Convention to be held in Melbourne during Easter (Sat. 9, Sun. 10, Mon. 11, April) 1966, at the Federal Hotel, 547 Collins St., City.

Join the clinics visit home layouts Victoria's steam museum enter the model competitions ride the 2'6" steamer "Puffing Billy" to Emerald in the Dandenong Mountains.

Registration fee, including Convention dinner, per NMRA member, approximately £5 (\$10)*. Hotel accommodation (b & b) per person, £5 (\$10). Children at concession rates.

Registration forms will appear in the next issue of this magazine.

* Another good reason to join NMRA. —Ed.

PASS EXCHANGE

Wally G. Kennewell, who has been running this column feels that it is not sufficiently popular to warrant it continuing. The column appears for the last time in this issue.

PANHANDLE & PACIFIC R.R.,
J. R. Price,
401 Mills,
Dumas, Texas, 79029, U.S.A.
THE GALAXY CENTRAL R.R.,
S. Meaney,
55 Old Violet St.,
Bendigo, Vic.

THE AUSTRALIAN MODEL RAILWAY ASSOCIATION

New South Wales Branch

Presents

The Model Railway Exhibition

to be held at

SYDNEY LOWER TOWN HALL

FRIDAY, OCTOBER 1 10 a.m. to 10 p.m.
SATURDAY, OCTOBER 2 9 a.m. to 10 p.m.
MONDAY, OCTOBER 4 9 a.m. to 10 p.m.

(Six Hour Day — Public Holiday)

ADMISSION: Adults 3/- each — Children 1/- each

There will be an extensive display by Model Railway Clubs, Hobby Shops, Trade Distributors, and Private Exhibitors, which will cover every phase of the hobby. Railways and tramways, electric and live steam, from the small scales to the largest, are combined to show you modelling at its finest.

The hobby is becoming more popular every year with new models coming into being. Come along and bring your family and friends.

JOHN DUNN, Exhibition Chairman.

PECO



STREAMLINE

**UNIVERSAL TRACK WITH
THE FINE SCALE LOOK**

You do not of course need to twist or screw track into the shape illustrated, but it does show just how strong and flexible PECO-Streamline really is!

A complete trackage system in HO/OO Gauge with a prototype realism and a precision engineered finish to delight the eye and bring joy to the heart of every Railway Modeller. Universal in application, it accepts wheels of every known make except Trix Coarse Scale. The

PECO "Streamline" system is complete in every way; track, points, crossings, metal and insulated rail joiners, foam ballast underlay, point motors, switches and anything else that hasn't been mentioned.

PECO "Streamline" Track is two-rail but Stud Contact strips for Marklin and Centre-third rail kits are available extras. With nothing to warp, twist or rust, it can be used outdoors as well.

PECO "Streamline" is virtually unbreakable and can be curved to almost any radius without the necessity to cut the web. Fitted with Code 100 Nickel Silver Rail, the 130 realistically wood grained plastic sleepers per yard give it that long length look. Because of its abnormal strength it can be used again and again to meet layout modifications! Wheels of all known varieties, Trix Coarse Scale wheels excepted, run on

PECO "Streamline" Track and pass comfortably with reliability through

PECO "Streamline" Points.

Thousands of Australian Railway Modellers swear by
PECO "Streamline" Track & Points.

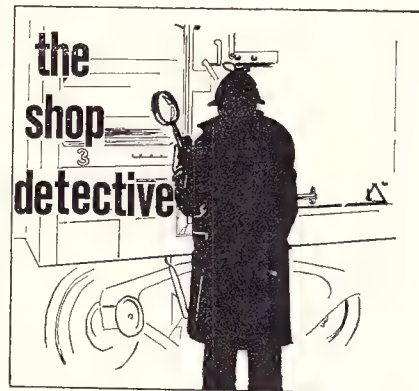
**AVAILABLE FROM HOBBY & TOY SHOPS THROUGHOUT AUSTRALIA
No. SL-100X — 10/6 yard.**

PECO

AUSTRALIAN MODEL CRAFT CO.

452 Jamieson Street, Albury, N.S.W.

P.O. Box 118, Albury — Phone: Albury 21-2473.



No doubt even the best sleuth can be fooled by distant smoke and despite his wisdom, your Shop Detective is obviously no exception! I regret the need to have to scotch, at least for the foreseeable future, the amazing revelation that The Model Dockyard will be introducing a model of the famous "Puffing Billy" in HO_{N3}. The idea of such a model has certainly been discussed but not yet decided upon. I hope the Dockyard has not been embarrassed by too many orders.

Well, here I am in South Australia and I have the following news to report both for local enthusiasts and possibly some interstate modellers as well.

I discovered that at Bridgland's there are Wrenn nickel silver points and crossovers which are being cleared at approximately 30% below retail price; these have fibre base. This firm also has a large range of ready-to-roll locos and rolling stock from such firms as Tri-ang, Rivarossi and Lindberg lines.

Da Costa Books and Models, of Grenfell Street, have a comprehensive range of the better quality model railway components both for scratchbuilders and newcomers and, of course, armchair enthusiasts.

Here you will find a complete range of Kadee couplers, uncouplers, trucks and castings, and a wide range of Central Valley freight and passenger trucks. These are quite superbly detailed at a reasonable price.

There is a good range of castings by Selseys of America, Sentinel of Australia and Kadee in addition to a wide selection of North Eastern scale lumber.

For the newcomer there are good quality ready-to-roll scale locomotives and rolling stock from Rivarossi, Athearn, Tenshodo and Crown, in addition to these there are kits which are readily built by anybody and Mr. Len Opie is an experienced HO modeller who can help with any problems.

Then to complete the list there are numerous copies of the recent American, English and Australian publications including such fine titles as "Rails, to the High Country" and "Narrow Gauge Country".

SUBSCRIPTION EXPIRED?

You will find that your expiry date is included with your name and address on the magazine envelope. Check now and renew in plenty of time.

THE FABULOUS ERA OF STEAM — VICTORIA'S LOCOMOTIVE MUSEUM

By WILLIAM C. FRASER

The old steam engine is largely a thing of the past, and because of this, is being gradually phased out of railways all over the world. Australia's railway system is no exception.

Thus, when the Victorian Railways announced their plans to replace all steam locomotives by diesel power, there was a widespread public feeling in that state for their preservation.

An offer was made by the Victorian Division of The Australian Railway Historical Society to care for and maintain any locomotives that could be made available by the V.R. for preservation.

The Society's offer was accepted by the Victorian Railways and plans went ahead to construct a steam locomotive museum in Champion Road, Newport, Victoria.

The Australian Railway Historical Society was founded in New South Wales in 1933 and now has branches in all states except Tasmania. Its membership is well over 1,000 and includes people from all walks of life.

These were the people who worked to turn their dream of an Australian steam engine museum into a reality.

When news of the Society's aims was released to the public, aid rolled in from all sections of the community.

Society members, private enthusiasts, and many others all came forward to help in the restoration and display of the old engines.

Many large business firms gave freely to the project. Among the most prominent were; Massey Ferguson (Aust.) Pty. Ltd., who donated loco F-179; Australian Paper Manufacturers Ltd. who donated engine D2 604; B.A.L.M. Paints Pty. Ltd. for their donation of black paint used initially to re-paint the engines; Petroleum Refineries (Aust.) Pty. Ltd., who constructed the museum's entrance ramp and bridge; The Shell Company of Australia Ltd. for its solvents and greases, and Middendorp Electric Co. Pty. Ltd. who donated electrical equipment and installed it free of charge.

The Victorian Railways, in addition to donating several engines, provided storage space in the form of Department Land, and track on which to place the exhibits.

The project was an unqualified success and soon the Society was able to count eleven old steam engines on display in its open-air museum at Newport.

The exhibited locomotives are: An F-Class (type 2-4-2 T) of 1910-11; an E-Class (type 2-4-2 T) of 1888-94; a D4 Class (type 4-6-2 T) built in 1908-13; a Class T (type 0-6-0) of 1875-85; a Y-Class (type 0-6-0) of 1888-89; a D2 Class (type 4-6-0) built during 1902-20; a D3 Class engine (type 4-6-0) of 1929-47; an A2 Class loco (walschaert) (type 4-6-0) built in 1915-22; a Class C engine (type 2-8-0) of 1918-26; an X-Class loco (type 2-8-2) of 1929-47; and an H-Class engine (type 4-8-4) built during 1941.

In addition to the locos, the museum has several other pieces of vintage Australian railway equipment on display.

Admission is free, but donations of one pound or over are allowable tax deductions.

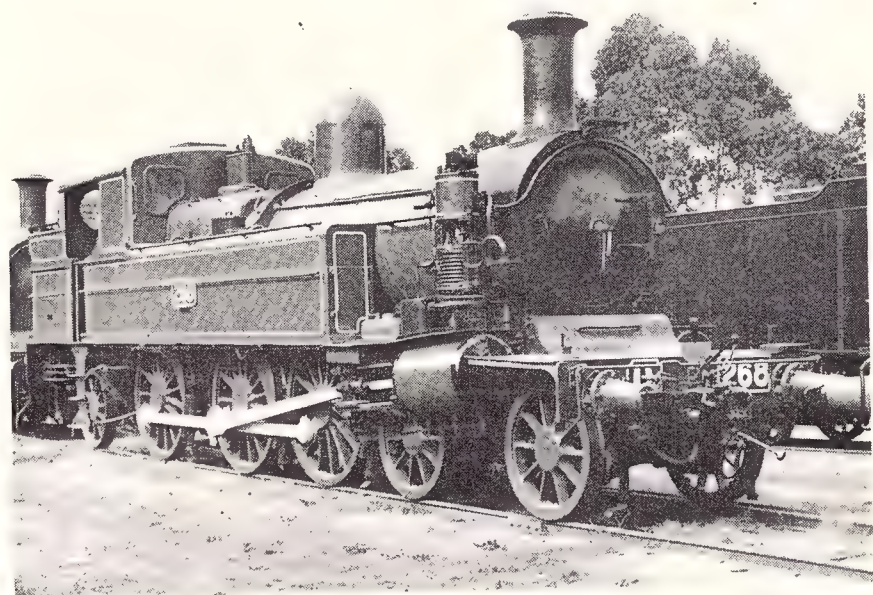
A popular tourist attraction since its opening, the old steam locomotive museum is a fitting tribute to Australia's early railway history. A visit to the museum will be one of the attractions during the NMRA Convention during Easter 1966.

Photographs by Rod Dunbar.

An overall view of the steam locomotive museum at Newport, Victoria



A D4 Class locomotive built during the years 1908 to 1913.



A FEW HINTS ON LINING MODELS

By JACK GRIERSON

The author, whose fine models have appeared before in A.M.R.M., is not satisfied to merely build his own locomotives but puts the finishing touches to his creations by careful painting, lining and lettering. Readers who practice the suggestions outlined on this page will soon become adept at this interesting aspect of railway modelling.

Firstly, we have to buy some materials to work with and if the purse will run to a small spray gun, that will be high on the list. I don't think anything can beat a good spray job for a smooth finish, so try to buy or borrow one.

If not, we will have to paint our models by brush. The brand names of the brushes mentioned hereunder are only mentioned because they are the ones I am using. The reader has the choice of Winsor and Newton, Rowney, Reeves and Rekab. All brushes can be obtained from stores selling artists' supplies.

If the large areas are to be brushed on, a flat 1/2 inch Rekab No. 321 sable and ox hair brush will be found quite satisfactory. This is a ticket writer's brush and is priced at about 14/- in Sydney.

A smaller flat or a Winsor and Newton No. 5 series 7 sable hair can be used to get into small places where the bigger brush would be too awkward. The series 7 is an artist's water colour round pointed brush and will be found very useful.

For lettering and fine lines, a No. 0 series 7 Winsor and Newton brush, price about 5/- can be used. It is a small pointed one. Another type is a No. 0 Rekab ticket writer's brush, a rather long-haired round brush flat at the end. A No. 00 is finer still, and are priced at about 4/- each. Both types have their uses so wouldn't be wasted if both were purchased.

For ruling fine straight lines a ruling

pen is needed. Get one that can be opened, cleaned and closed again without altering the adjustment.

One blade of one type opens on a hinge at right angles to the body of the pen while on another, one blade swivels around. Both can be cleaned without altering the adjustment. Price about 21/-.

Another type of pen used for lettering and lines is similar to an ordinary pen nib and called "Iridinoid" made by E. Perry, England.

They are available in varying thickness, fit an ordinary nib holder and are only about 9d each. Care must be taken when using the nib as any alteration of pressure on the pen will alter the thickness of the line. A 1 foot steel rule is our last item.

As with all paint jobs the surface to be painted must be free from grease, dust etc. One of the best ways I know to clean metal or plastic is detergent and warm water, not too hot for plastic. Use a 1/2" or 1" brush from the chain store to brush over the job to dislodge any dirt and rinse with warm clean water.

If spraying or painting plastic test on a spare piece or some place where it won't show if it affects it.

When spraying, don't hold the spray in the one place too long, and don't put too thick a coat on at one time, otherwise it will run. Remember the old saying, two thin coats are better than one thick one.

After the base coats have been applied and dried the time comes to put the lines and numbers on.

Firstly we must put a piece of masking tape on the back of the rule. Have the edge of the tape about 1/16" away from the edge of the rule. This will help prevent paint from running underneath. Mark lightly with a pencil where the lines are to go on the model.

When ruling straight lines, fill the pen by charging a brush and wiping about 3/8" of paint between the jaws. Place alongside the rule and with an even motion draw the pen over the work. If the paint doesn't run freely and stops flowing it is too thick. If after thinning it spreads, the paint is too thin.

Experience is the best teacher as to the best paint consistency.

If the pen stops flowing before the line is completed, it can be continued by tapping the pen on a piece of paper until it flows or cleaning and filling with fresh paint. Then with a stroking motion, join the line where it ended. By doing this the chances of a blob where the ends meet will be lessened.

If a thick line is to be drawn in, draw two thin ones and fill in between with a brush.

If the line takes a curve use the No. 0 series 7 or the No. 0 or 00 lettering brush. Before using the brush, pack up either side of the model with blocks of wood to just above the level of the model and place a piece of timber say 1/2"x3"x12" on the blocks to form a platform for a hand rest. Charge the brush and gently wipe excess paint on to a piece of scrap paper, gently bringing the brush back to a point.

With the hand on the platform carefully draw the curved line in. Always be relaxed when doing any lining otherwise the hand is likely to shake.

Here again, if the paint doesn't run properly, it will need thinning and if it hasn't any body and spreads, it is too thin.

It is a good idea to paint a few pieces of scrap timber or metal with the base colour and practice lining and lettering with the pen and brush until the reader thinks he is good enough to line his model.

When doing any lettering or numbering, mark out lightly on the job with pencil and carefully draw in. They can be drawn up on a piece of tracing paper, the number or letter marked in on the back and the letters traced onto the job.

Straight parts of small numbers can be drawn in by using the steel rule as a straight-edge held at an angle on the

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platform and running the ferrule (the metal part) of the brush along the edge of the rule as a guide.

If a rough or uneven edge has been made, wash the brush in turps, wipe on a piece of cloth to remove the excess turps and carefully wipe away the rough or misformed edge with the point of the damp brush.

Always try to copy the style and spacing of the prototype letters.

Carefully wash the brushes in turps or paint solvent after use and then in soap

and warm water and rinse well. Shake out excess water and gently shape the brush on a finger to its original shape and let dry.

It is a good idea to make up some paper tubes to fit over the ferrules of the brushes to protect the hair from being bent out of shape when stored in a box. It is also a good idea to place some naphthalene in the box. Properly looked after the brushes will give years of good service and the pen a lifetime service.

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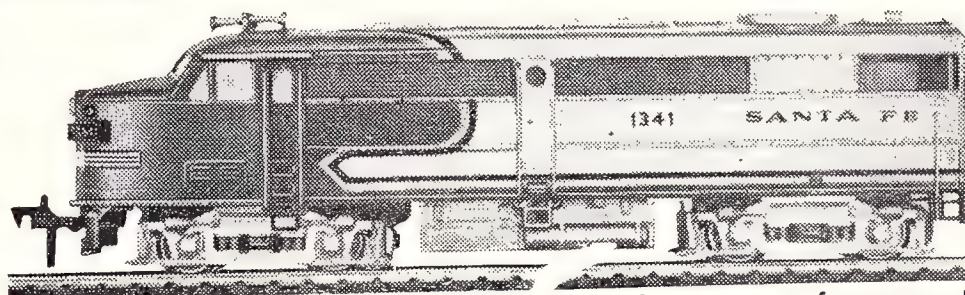
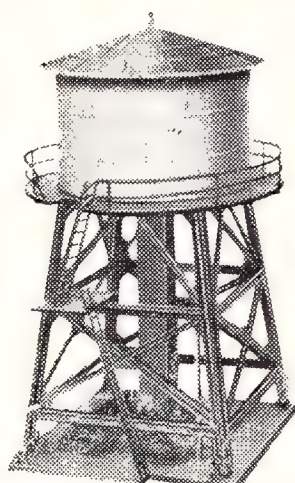


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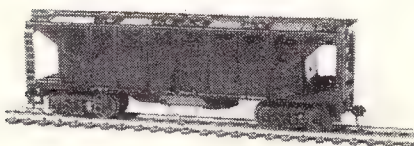
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HAVE FUN WITH HOPPER WAGONS

By PAUL ROGERS

Having obtained a brass model of the C.38 loco, and constructed a few 'MHG' brakevans after reading Chris Pratten's excellent article, I decided to put the meat in the sandwich by building up a block-wheat train of about 10 or 12 bogie wheat wagons.

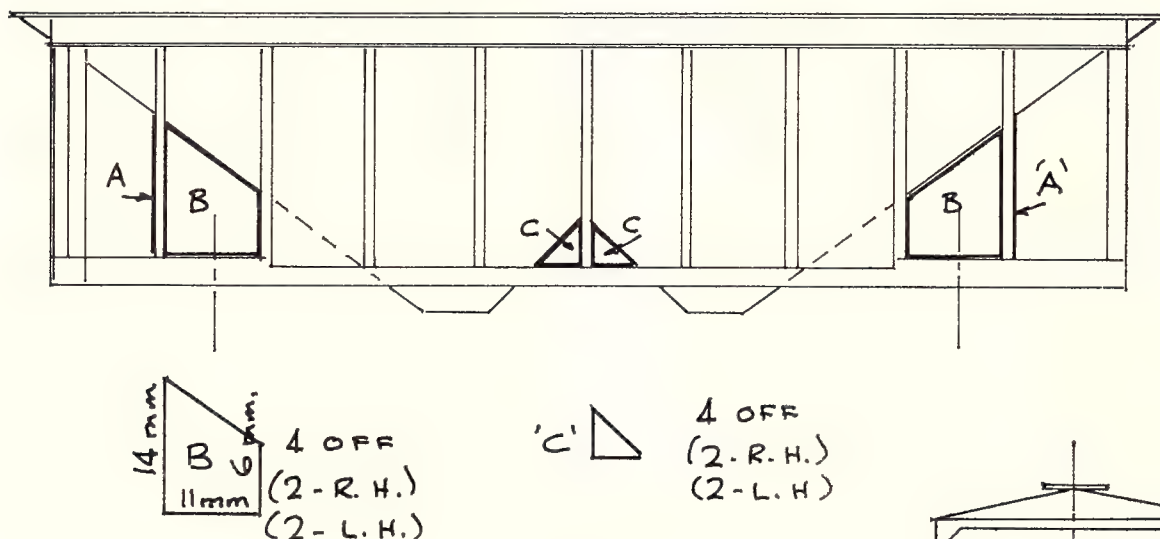


FIG 2

The wagons are merely converted 'Triang' bogie cement hopper cars, but with a few modifications they become BWH wheat hoppers, or BCH & HCH coal hoppers, or alternatively BRH & HRH cement hoppers.

As all the prototype wagons are virtually the same, excepting the BCH & HCH have no roofs fitted, the same model does for all types.

The construction is virtually straightforward, and is as follows:—

Firstly, take some cardboard about 1/32" thick, and cut two pieces 28mm by 18mm. Fit these pieces one at each end of the car to fit across the triangular-shaped opening at the end of the wagons.

Next, cut four pieces 6mm x 8.5mm, and block up the triangular openings in the centre of each side of the car.

Thirdly, cut an irregularly shaped quadrangle (square), as in fig. 2, and four of these fill the openings on the car sides, in the second panel from each end. This now gives the effect of a more solid-looking wagon.

Caution:— When using the cardboard ensure an exact fit flush with the wagon sides, and always keep the smooth edge of the cardboard on the exterior, as the surface of the rough side absorbs too much paint, and consequently ruins the car's appearance.

I cut a piece of 1/16" balsa strip to a length of 5 3/8" long, and stuck this on one side of the roof to resemble the cat-walk on the prototype wagons. The first few dozen prototype 'BRH's do not have this cat-walk installed, and I found while constructing these models, that the majority of the hopper wagons in use have only centre hatchways on the roof, although the early batch of 'BRH' wagons have a centre cat-walk and three hatches either side of this.

The roof on the models is wrong if you wanted to make the later wagons, although I have retained them as I guess I'm too lazy to build new roofs. On my layout, however, these wagons spend 50% of their time minus roofs and are utilized as BCH coal wagons.

Finally comes the painting. I covered the complete body work with two coats of Humbrol gloss black enamel, a few hours apart, as I found that matt black dries too quickly into a light grey colour.

For finishing touches brass wheels were substituted for the plastic ones, and knuckle couplers were installed.

Apart from painting, the bodywork was converted in about 10 minutes per wagon, and I have turned out an average of two or three a night, so my total of 30 should soon be reached. One point to note, however, is that the wagons amount

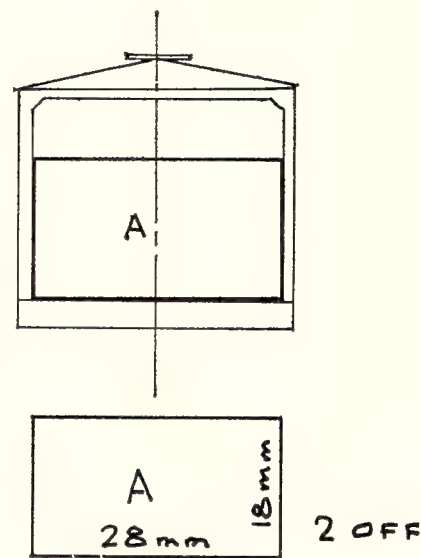


FIG 1

to an equivalent of 45' prototype length, whereas the full-sized wagons are 36'4" in length.

I don't think this is noticeable where a few of the wagons are marshalled in a block formation. The main point I would like to emphasize in this article is that there are many proprietary vehicles from leading makers, that, with a bit of thought, can be turned into Australian type rolling stock.

MOUNTAINS OF YESTERYEAR

by PAUL ROGERS & HOWARD ARMSTRONG

The advent of electrification on the main Western line as far as Lithgow, 97 miles from Sydney, heralded the beginning of a new age of motive-power for New South Wales; and, simultaneously, sounded the death-knell for steam! Most classes of steam locomotives were affected to a considerable degree, but one class was made extinct, almost overnight, by the introduction of faster, more efficient, motive power in the form of forty '46' class electric locomotives! This class was the D58, a 'heavy Mountain' 4-8-2 type, which, along with its predecessor, an identical cousin, the D57, had hauled practically all heavy goods trains over the main N.S.W. routes for quite a few years!

The career of the giant D57 began in 1929, at a time when faster, more powerful replacements were urgently needed for the D55 2-8-0 Consolidations, most of which had been equipped for express goods workings by the installation of

'Southern' type valve gear.

These locomotives, for over 25 years, had handled the bulk of the fast goods services in this state, but by 1929 it was apparent that a new type of loco was needed to handle the ever increasing goods traffic, and the introduction of faster schedules.

To meet these heavy demands the D57 Mountain type was built under the supervision of Mr. E. E. Lucy, Chief Mechanical Engineer for the N.S.W.G.R. Clyde Engineering, (the stable of the famous streamlined D38 Pacifics a few years later), constructed the giants while Mort's Dock in Sydney manufactured the enormous tenders.

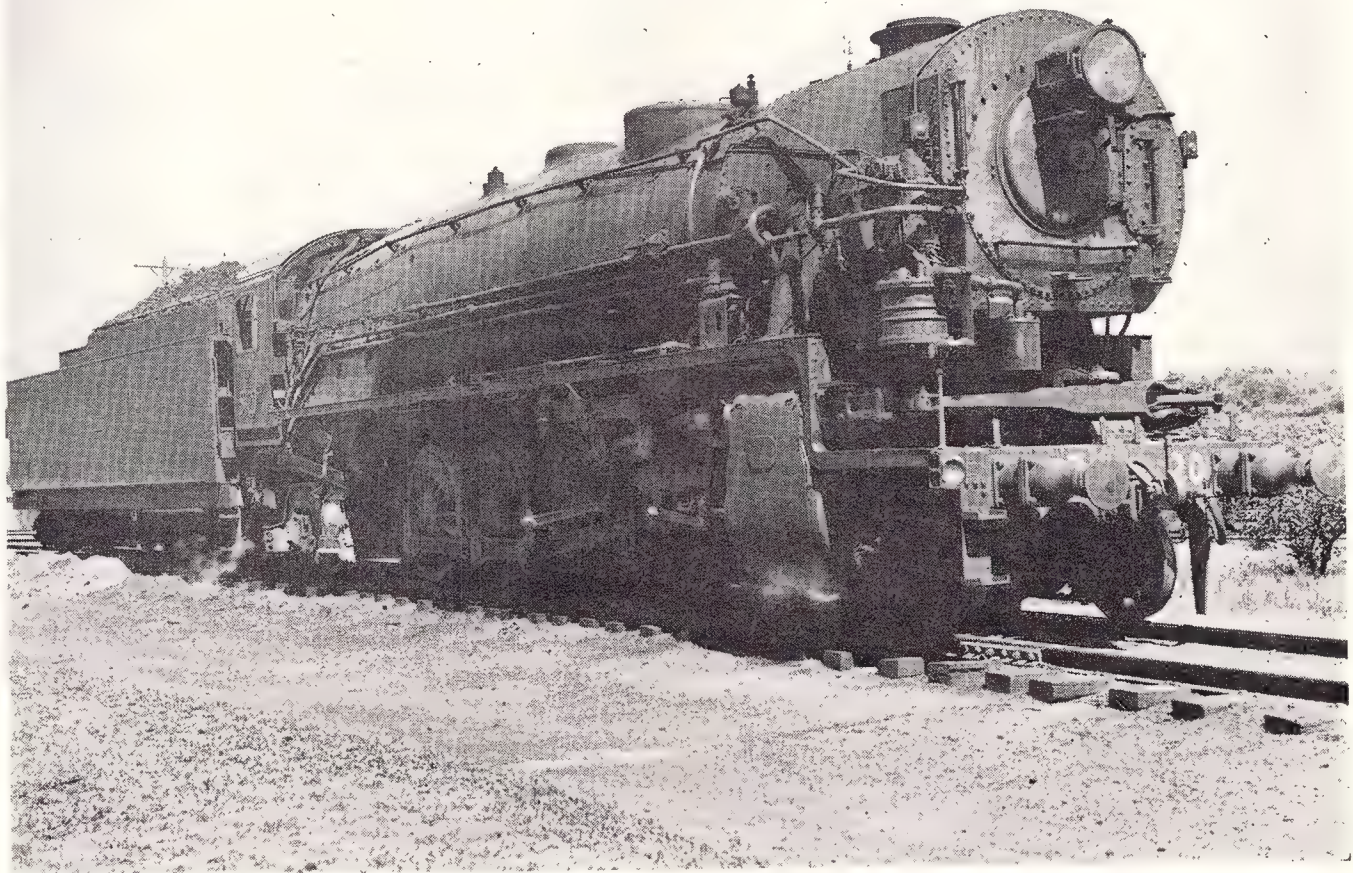
The locomotives were fitted with triple cylinders with a 23½" by 28" stroke. The Gresley valve gear overhung the front buffer beam, and there was an alarming 'gooseneck' on the leading driving wheel axle to accommodate the throw of the inside connecting rod. Other features in-

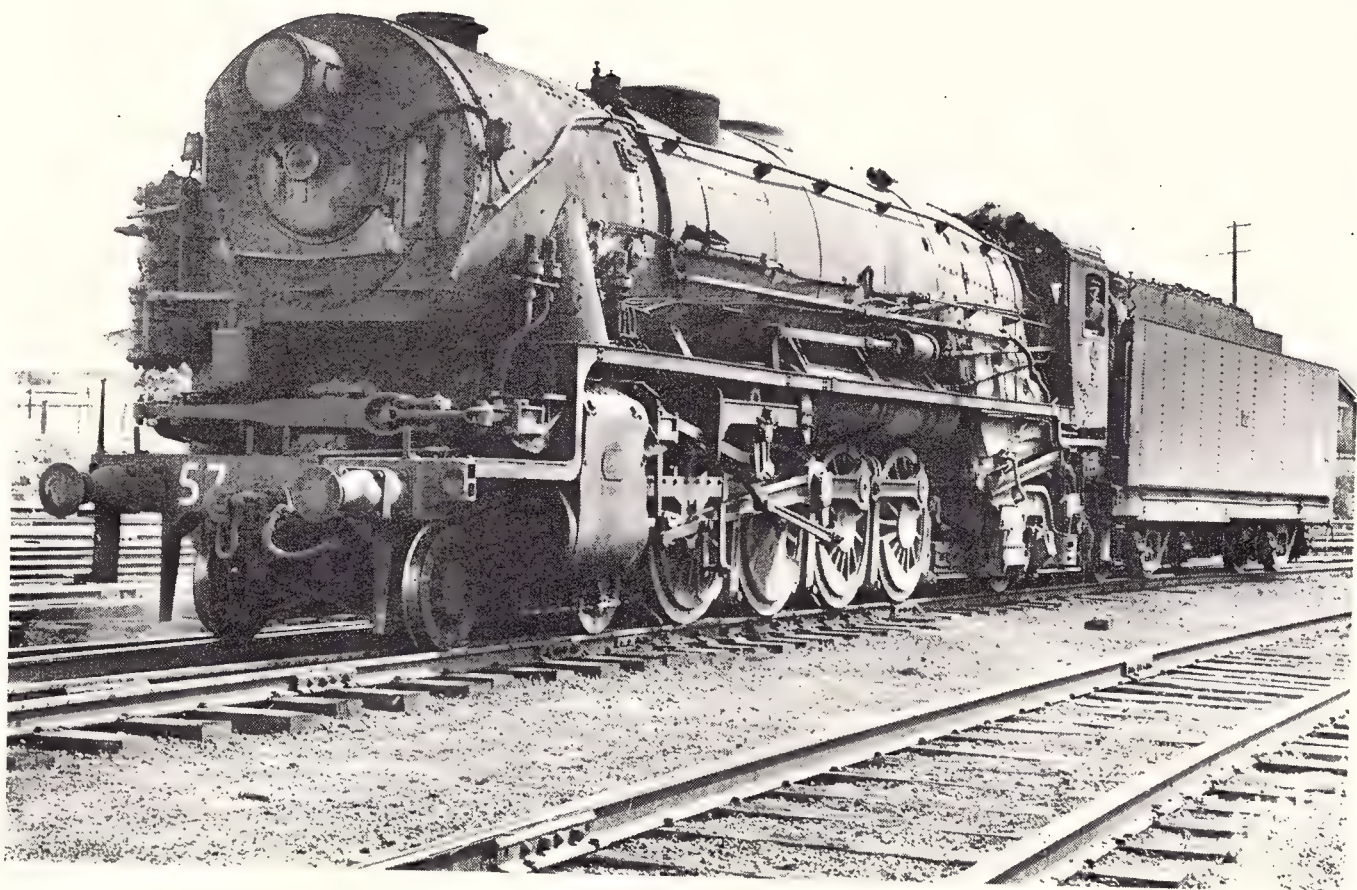
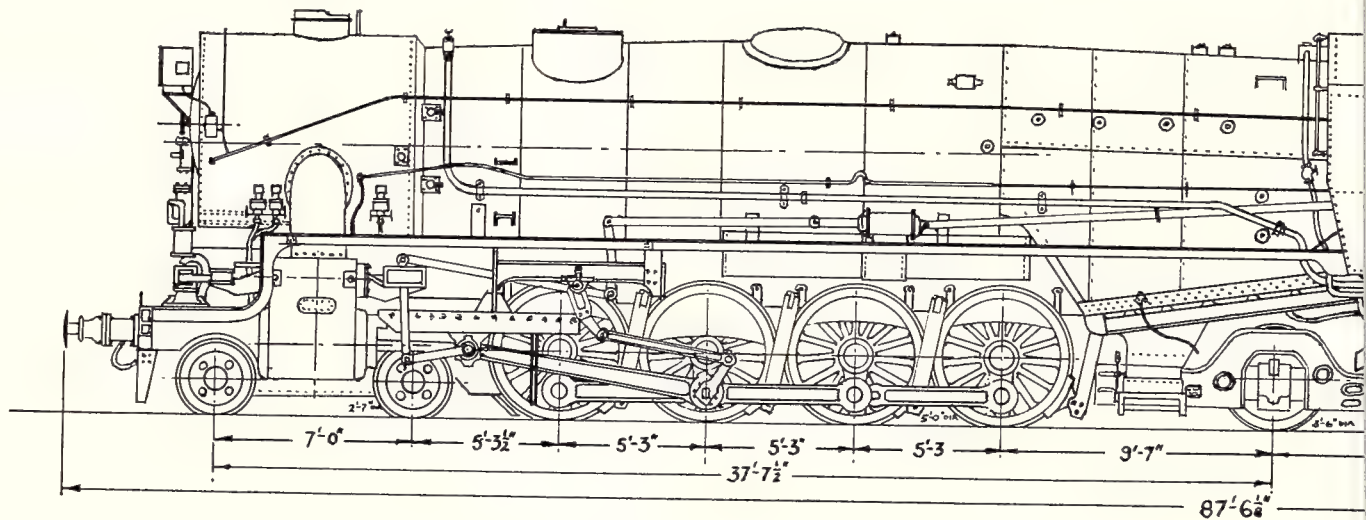
Plan prepared from Official
N.S.W.G.R. Drawings
by HOWARD G. ARMSTRONG

cluded a self-emptying ashpan system, mechanical stoker for the firebox, a 65 square feet grate, and a boiler pressure of 200 lbs. They developed a tractive effort of 56,000 lbs, and total weight of engine and tender was 228 tons. The total boiler heating surface (Firebox, Combustion Chamber, Tubes and Flues, Circulatory Arch tubes and Superheater) was 4163 square feet!

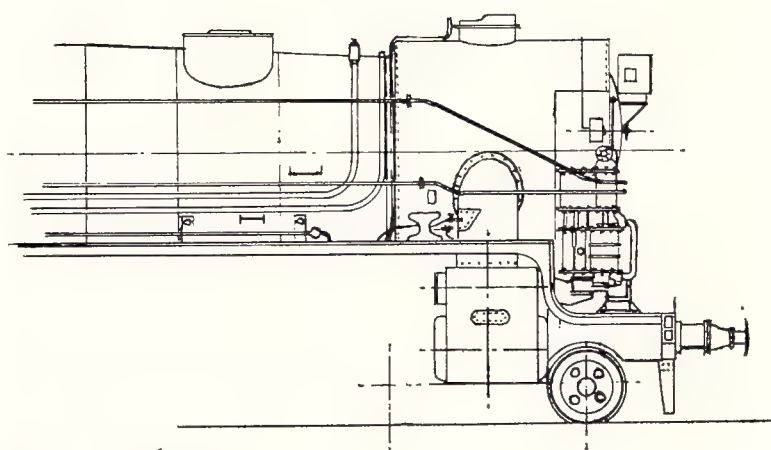
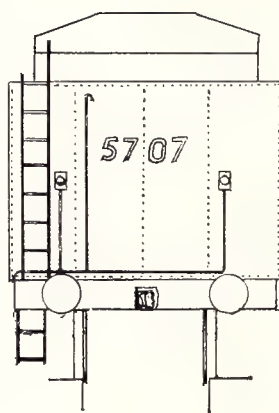
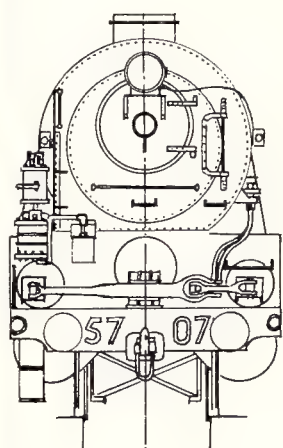
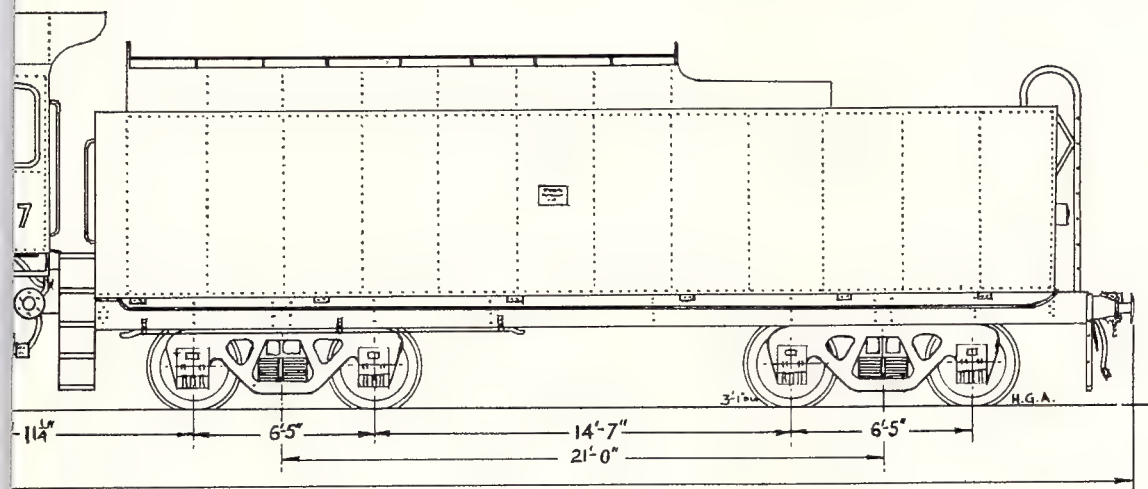
The depression, then World War II followed, and in 1950 a new batch of 13 Mountains arrived, bringing the total to 38 locos in all. These were the D58's, with the same dimensions, weight, etc. as the 57's, but with a few minor improvements on the design.

(Continued P. 16)





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Mountains of Yesteryear (Cont.)

These included a rack and pinion assembly to operate the inside valves, a large steel cover for the overhanging valve gear assembly on the front buffer-beam, and a slightly smaller diameter of the cylinders, thus producing a stroke of 21 1/2" x 28".

Until scrapping, the D58's were mostly utilized for traffic working on the Blue Mountains section of the Main Western Line, and frequently toiled with other locomotives up the 1 in 32 grades from Valley Heights to Katoomba on the down, and between Lithgow and Katoomba on the up. The climax of steam loco working came when 2000 ton coal trains with long lines of BCH & HCH bogie coal hoppers were hauled from Lithgow to Katoomba en route to Sydney.

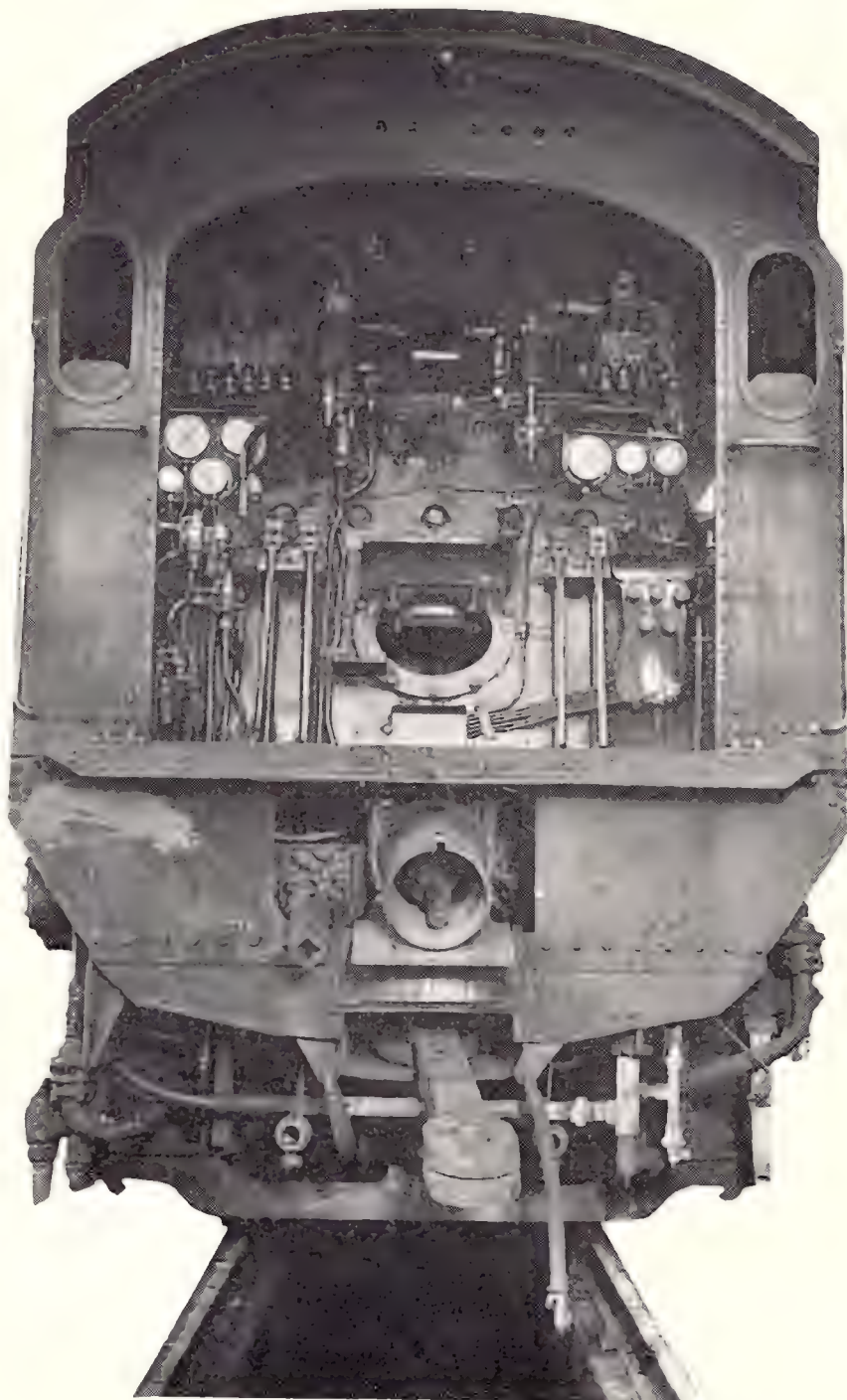
These trains, now hauled with ease by two 46 Class units in multiple, were assisted by two Standard Goods Engines, (D50, D53 or D55 classes), with an additional Standard Goods at the rear, banking. The train engine itself was either a D57 or D58 'Mountain'; however, this working was to be short-lived, and by October, 1958, all D58's had been withdrawn from service, and all have been subsequently scrapped, the last couple, 5801 and 5804 being cut up in 1964, after the entire fleet of 13 had spent six years in retirement at Enfield prior to scrapping. The D57's, which had been used mostly on the southern line, held out for a few more years, and in a vain attempt to prolong the useful life of the D57, the loco was tried once on the Sydney-Albury section of the Melbourne daylight express, now No. 65 Intercapital Daylight hauled by a 44 Class Diesel.

However, the D57's were found to be useless for this purpose, as broken draw-

gear on the cars, and battered track, soon proved, and the decision was then made to cut them up, the last few 5714, 5717, 5723 and 5725 cut up early in 1964. Only a sole survivor remains, No. 5711, and this has now been stored at Enfield prior to being permanently exhibited in the Rail Transport Museum as a fitting reminder when the 'King' of the locos once ruled the rails.

This is a view inside the cab of a 57 Class.

These are Official Railway Photographs. Readers may obtain copies from the Publicity Officer, N.S.W.G.R. 19 York St., Sydney



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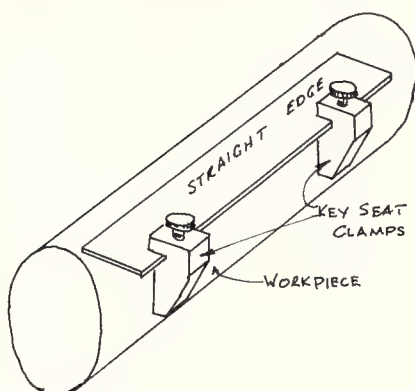
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The name given to these handy little items hardly gives a clue as to their function, however, they are in fact clamps. They are only sold in pairs and are intended to be clamped a suitable distance apart to an engineer's steel rule.

This then provides the rule, which is being used as a straight edge, with two stops at 90° to the straight edge face. The straight edge can then be held against round stock of suitable diameter, making it easy to scribe a line true with the longitudinal axis of the round stock. To be of any use and produce accurate results it is obvious that the keyseat clamps must be exactly alike (two of a kind if you prefer it). Hence the reason why, if you are unfortunate to lose one, you will have to buy another two.

PAINTING BY NUMBERS by Les Street

For painting models, here are several old but always sound tips:—

(1) Always paint when you are *relaxed*. When you are tensed up, painting your super-dupa loco is not the best way to relax.

(2) Matt paints are *always* easier to use than the hi-gloss variety. *Never* use the latter when the former will do.

(3) In small scale work, the contrasts should be toned down and the shades should be rather *lighter* than the prototype shade.

(4) Two thin coats are better than one thick one.

(5) Use the right brushes. Cheap brushes are expensive in the long run. Use flat chisel shaped brushes for large surfaces to cut down brush marks.

(6) Take good care of your brushes. Always wash them out in the appropriate solvent or support them in a bottle with the bristles *clear* of the bottom to avoid bending them.

(7) Don't work in dusty conditions and don't handle the model on the exposed surfaces. *Everyone's* skin is oily and this won't help your finish.

(8) If painting plastic, *always* try out your paint on a scrap piece or on a concealed model surface in case the paint damages the plastic surface.

(9) Clean your model *properly* before painting.

(10) If you are not *really* satisfied, do it *again!*

CURVING SHINOHARA POINTS by Russ. Siddall

I recently put down some track up at one end of the layout where space is tight, and all the trackage had to be on a curve to make best use of the available area.

In view of the many comments I'd heard about it, I decided to use Shinohara track in order to save the time and effort of laying individual components, particularly as this particular area is at eye level and the difference between the track there and at lower levels would not be noticeable.

Shinohara don't seem to market a curved point, so I looked into the possibility of curving their standard points. There didn't seem to be any obvious difficulties, so I bought two No. 8 switches for experimentation. If you are interested, here is the method I used.

The first job is to cut the webs between the sleepers so that the point can be curved. I did this with an Eclipse lino knife — turn the point upside down on a firm surface and make two cuts slanting away from the sleepers, between each pair of sleepers. This will cut out a small piece of the plastic web.

These cuts should be made along the straight stock rail, and both point closure rails, but not along the curved stock rail. Do not cut the webs at the frog, as this will be left straight, and also leave the webs at the point where the point blades are pivoted and also at each side of the point tie rod.

You are now ready to do the actual curving of the point.

This is done in much the same fashion as you would curve a length of track,

by working it into shape with the fingers, and moving sleepers as necessary. You will find that you can get the equivalent of a 36" radius curve into the straight portion of the point, and this brings the curved track down to about the radius of a No. 6 switch.

The point blades on my No. 8's fitted very well to begin with, but after the point had been doctored they were way out, so I unsoldered the curved blade in order to refit them. Use as little heat as possible during this operation, as you do not want to overheat the plastic.

The refitting consists of bending the blades so that they will fit neatly up to the stock rails, which should both also be bent, and then resoldering the curved blade. The resoldering job requires a hot iron and a quick hand if you are not to botch the job. The pivot end is particularly ticklish, because the pivot works on a little brass plate, and it would be disastrous if you got the blades soldered to this. Put a small drop of light oil on the pivot, just a smidge of flux on the curved point blade, then apply a hot iron to the rail until the solder flows together.

Assuming the solder job went all right, you should be in business and ready to lay the points in whichever manner you prefer. In my case, including the experimentation, the first one took me about an hour and a half, and the second three-quarters of an hour.

Operation seems all right, although as the track is only new they haven't had much running yet.

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The WAITARA SHUNT

By DAVID B. LEITCH

A Fascinating New Zealand Branch-Line to Model

View of the Waitara Yards showing station (right), loco shed (right centre) and freezing works (centre). The wagons are La class 4 wheel wagons being assembled for a run to Lepperton.



Here is a prototype that has almost everything for the modeller. It could be operated as a part of large layout or form a layout of its own with sufficient interest to keep most modellers happy.

After that build up, you will doubtless be wondering what exactly is the "Waitara Shunt"?

A railway that knows no timetable, that operates only Monday to Friday, whose staff talk about "our train" in tones akin to those of lovers, where else but Petticoat Junction? But no, this is not Petticoat Junction, though it could well be. It is in fact "the Waitara Shunt line" a little 7 mile branch line that meanders through the lush pastures and hills of Northern Taranaki in the North Island of New Zealand.

This fascinating little line is a relic of the past in the diesel age. It is still one hundred per cent steam powered (which alone probably makes it unique) and it is a world apart from the rest of the New Zealand Railway system of which it normally forms part.

Waitara is a small town of some 4,500 people whose basic reason for existence is the large freezing works which sits almost in the middle of the town. The works dominate the town, and they provide the only reason for the existence of the "Waitara Shunt."

Meat, stock, coal and timber with some general freight are the main commodities carried over the line — stock to the works and meat away, coal for the furnace, lumber for building and general goods for the town.

Keen to model strict prototype but short on funds and space? More interested in operation than in "round the oval" running? Want a model that is different but strictly prototype? Then friend, the Waitara Shunt line is the model for you. It is simple to build, interesting to operate and has many features that we often wish we could use in our model layouts but don't because "the real ones don't."

plate. In next to no time I was being welcomed aboard by the friendly crew, invited to take the fireman's seat and was soon puffing up the weed grown track to Lepperton. This is the junction point with the main Taranaki-Palmerston North line and consists of a station, a few sidings and a signal box.

At Lepperton the engine shunts off the empty wagons and loaded refrigerated wagons and picks up any other wagons that through goods trains may have dropped off for it. There is no turntable at Lepperton or at Waitara, and the engine runs tender first down to Waitara.

The line is rurally pleasant, ferns and trees cover the sides of the cuttings, the countryside is rich green dairy pasture, the track is partly weed grown, and the fireman has to pull his head in at one bend to avoid being slapped by a trailing creeper. The climb out of Waitara is steep. The line starts on an upgrade and continues like that for the first two miles and is reputedly the steepest grade in the North Island.

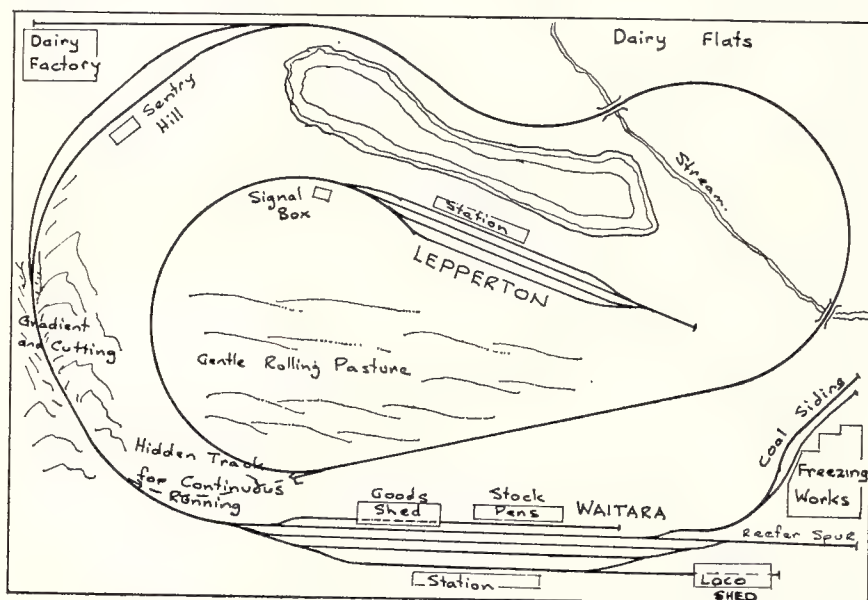
An Ab can take only 220 tons up it and often the train is simply split, half taken up to a siding at the top of the hill, and then the other half, whereupon the two are connected and the little train puffs busily away again.

There is no timetable on the Waitara shunt, trains proceed on a "when ready" timetable and it certainly appeared to live up to the driver's remark that "this is an old man's rest home" — he failed to add the obvious "and a very pleasant one too!" Modellers who worry about running to timetable, can relax and simply run trains!

The line's motive power is one of the beloved Ab Pacific locomotives built forty odd years or more ago and without doubt the most popular engine with crews that ever turned a wheel on New Zealand track.

My chance to travel over this little known line occurred while visiting friends, and dropping off at the station to see what was doing.

While chatting to the Stationmaster he invited me to go for a ride on the foot-



The main buildings needed would be a goods shed, station and engine shed at Waitara, plus freezing works and stock yards, and at Lepperton an island station and signal box. Shops and office buildings of the older type could be erected at Waitara if desired.

Rolling stock would be basically refrigerated wagons, a flat car or two, a string of four-wheel open wagons for coal and goods (Tri-ang wagons are good), sheep and cattle wagons (four wheel), and the occasional box car (four wheel). Tri-ang goods wagons could easily be modified.

The motive power, an Ab steam locomotive can be scratch built if you're that ambitious, or alternatively, the Tri-ang 4-6-4 Baltic Tank locomotive which is based on the tank version (Wab) of the Ab can be cut down and with suitable alterations capable of being made by all but the very rawest beginner and the addition of a tender (which can be scratch built from wood and balsa in an evening or two) a perfectly acceptable Ab can be produced that will satisfy all but the most fastidious scale rule fanatic.

Plans of an Ab are available from the New Zealand Railway and Locomotive Society, Box 5134, Wellington, at 2/- each. The conversion of the Tri-ang model is so simple that I have not thought it necessary to give details in this article, except to say that the gap in the boiler left by cutting away the tanks can be filled with card which when painted black and weathered is almost indistinguishable from the plastic of the rest of the boiler.

The Waitara line is now "goods only" but was probably not always so, and the addition of an open end carriage would provide passenger traffic for those who desired it. A hidden stretch of track could provide continuous running for those who wish it.

On the average two or three trains a day are run. The average day would probably include the following activities.

The engine is brought out of the shed after firing up and trundles over to the freezing works to pick up empty coal wagons and return these to the yard, returning several full wagons. Refrigerated wagons are picked up and shunted ready to form the nucleus of a train. Empty stock wagons would be collected from the pens and any box wagons from the goods shed.

The train is marshalled and taken up to Lepperton — (don't forget the loading restriction on the grade). At Sentry Hill there is a dairy factory which provides an excuse for setting out and picking up coal wagons and perhaps a refrigerated car of butter. The train then proceeds on to Lepperton.

Here the wagons are shunted onto a siding for collection by the next goods

BACK NUMBERS

of this magazine are available at 2/6 each. Available are Nos. 2, 3, 5, thru 14. Add 5d postage for first copy, then 3d per copy thereafter. Make Postal notes payable to SCR Publications, Earlwood.

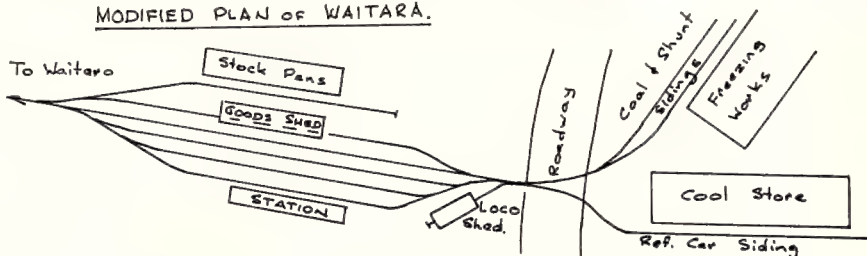


The diminutive engine shed at Waitara. Both front (in photo) and rear of the gallant old lady 748 are exposed to the elements. The lumber yard in the background also provides revenue for the line.



Ab 748 chugging along the coal spur to the freezing works. Plenty of detail here for the scale loco modeller

MODIFIED PLAN OF WAITARA.



train on the main, and the engine, guards van and any other wagons that have been left for collection go back to Waitara. If you enjoy shunting then you will easily devise many other variations on this basic theme.

If you run this as a branch line on a larger layout, it is quite in order to run your engine on the main. The prototype occasionally runs North to New Plymouth or South to Stratford Junction if some urgent consignment warrants it.

When painting the locomotive be as liberal with the weathering as you like. The crew explained that they used to clean their engines when the same one was used all the time, but now Waitara is included in the New Plymouth loco pool, and the crews got tired of cleaning engines that were changed every three weeks or so, and now no one bothers.

Ab 748 which was in use when I visited Waitara was a very dirty old girl, even her brass number plate was tarnished, and her maker's plates had long since disappeared though she was probably built in 1923. She wheezed and her pumps banged a lot but she was still energetic and pulled well for all her age and leaky valves.

Well, fellow modellers, there you have it. The Waitara shunt line, an interesting prototype and a potential for an interesting layout that could provide endless hours of pleasant relaxed operation.



SOUTHERN CROSS REGION Envelopes Available For Members

Members of the Southern Cross Region of the National Model Railroad Association may now purchase envelopes bearing the imprint illustrated above for their own personal use.

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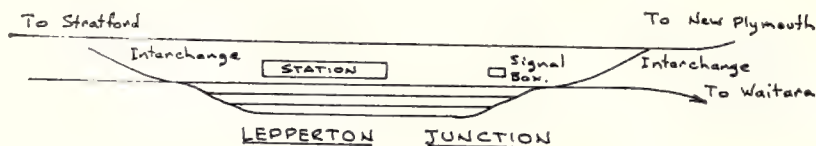
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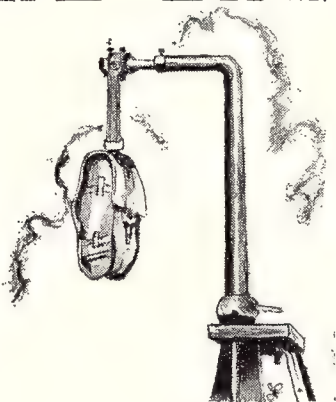
*Train ready to leave for Sentry Hill with a rake of La wagons.
748's leaky valves are apparent in this view.
To the right is an Xc box wagon (4 wheel).*



View up the line from the driver's seat of Ab 748 attacking the grade out of Waitara.



MAIL BAG



Sir,
I have received the April/May issue and am pleased to see that it is up to the usual excellent standard and would like to take this opportunity to congratulate you and the boys on the good job well done.

I hope that the magazine will have many more birthdays.

I suppose you will get hundreds of letters pointing out a couple of mistakes in this issue. The first is that the photo on page 14 is of a PHG guards van whereas Chris Pratten's article is on the MHG. Not much difference but the "experts" will soon pick you up. The second mistake is the bottom second photo in the Scenic Route. These are N.S.W.G.R. locos (70 class) and not V.R.

—HOWARD G. ARMSTRONG

Narooma, N.S.W.

Sir,

During recent months I have been engaged in quite a bit of discussion regarding reasons for becoming a member of N.M.R.A. and I have reached the following conclusions which may be of interest to some modellers who are wondering whether they should join.

Firstly, as the name indicates, we belong to an association, not a club. Why do people join associations such as trade union, motoring associations etc.? One reason is because other people and organisations are more inclined to take notice of an organised body rather than individuals.

Secondly, an association with sufficient funds can provide facilities, services and information which are normally beyond the scope of the individual.

So may I be so bold as to ask any readers who are doubtful about becoming a member of N.M.R.A. to just consider the above thoughts and look at some of the services and information provided by N.M.R.A. — Data Sheets, Recommended Practices, Standards etc. and the source of information available from the various committees set up by the N.M.R.A. in U.S.A.

Then for the modeller who wants to join a Model Railway club, there is always the opportunity of forming a club with other N.M.R.A. members who live locally, and to help you do this the N.M.R.A. has even a committee to advise on forming your own club.

Those interested may write to the Membership Chairman, of N.M.R.A., 11 Dempsey St., North Ryde or myself.

TERENCE M. CARPENTER

2 Coronation Ave.,
Petersham, N.S.W.

Sir,

When I first arrived in this country six months ago my railway modelling instincts were subordinated to the business of collecting seaborne baggage and general settling in. They were soon brought to the fore again by a visit by rail to Swan Hill. A long stop in Bendigo and a general nose around Swan Hill station showed me some of the fascinating prototypes here.

On my return to Melbourne I rushed off to a hobby shop with the dream of an R class 4-6-4 pulling gleaming blue coaches round my dining table. I was due for a shock. "An R class 4-6-4, sir? certainly, would that be New York Central or Rio Grande — I can't quite remember? — oh! the Victorian Railways one? (Cripes, Bert, I've got one of these mad poms here, he wants an Australian locomotive!) No, I'm sorry sir, they don't make one!"

And so it went on. I finally traced a NSWGR 4-6-0, a VR "B" class diesel and two names of firms making some wagon kits, and that was that. I suppose that this sad state of affairs is due to British and American competition with a large range of readily available models. How much support would a firm modelling Australian prototypes get?

I can see two glimmers of hope however. There seem to be some modellers of Australian prototypes (judging from pictures); and also your excellent magazine is making commendable efforts to show the Australian flag. Now come on you Aussies, don't tell me that I've come 12,000 miles just to find myself back with the G.W.R. — where's this independent spirit they told me to expect? What about the wise Australian modelling and buying Australian for a change?

FRUSTRATED MIGRANT

Melbourne, Vic.

Sir,

May I raise my voice in protest against the price charged for plastic model kits?

The first point is the difference of 6d. between the 1/72nd. aeroplane kits and the OO/HO railway kits. In England, where they are produced, both cost the same, so how come that on the way to Australia the railway kits pick up another 6d. more than the aeroplane kits? Can, or will, the distributors explain why?

The other point is the actual price charged for these kits. The RETAIL price in England is 2/- including a 15% tax. After all the charges are made for handling, transport etc. up to the time of landing in this country the price would have, I estimated, risen to 3/-. Is it either possible or plausible that Customs and excise, distribution wholesale and retailers profits, etc. bring the price up by another 2/3?

Having been in Australia six months I do not know if there is any plastics firm producing model kits. If there is not, I hope there soon will be — producing Australian kits of Australian prototypes for Australian modellers.

Surely nothing looks stranger than English models in OO scale mixed with American and Japanese HO scale models meant to represent an Australian scene.

Thank you for the A.M.R.M. It is good to see a magazine produced by a club and of good value, unlike in England where one magazine is in the hands of a general publisher, another by a company generally interested in all forms of transport and three others run by proprietary model firms. May you and your magazine continue and grow.

D. J. CROAGER

Port Adelaide, S.A.

Sir,

In the A.M.R.M. edition for April/May, 1965 it was stated that very little was available for modellers favouring the N.S.W. scene. This is quite true, and if I may, I would like to add a couple of items to the list. Firstly, the Tri-ang bogie cement hoppers are an excellent base for modelling BCH's, BRH's etc. Painted black, and fitted with knuckle couplers, and with a few additional details like roof walkways, they give a fair impression of the prototype.

With mine I have blocked up the majority of the 'holes' in the sides and ends, and finally painted the complete unit black.

The only snag is that the prototype is approximately 36 feet in length, whereas the models are built to 3.75mm scale, thus creating a hopper car 45' long! However, I run seven or eight behind a C38 loco and the result looks quite effective. With the editor's permission I would like to do a summary in the form of an article on modifications to the body-work of these units.

Secondly, the Tri-ang Double-Ended diesel in their Transcontinental range is based upon the B60 class of the Victorian Railways. Here again, however, the scale is 3.75mm, creating a diesel loco about 70' feet long, whereas the prototype is about 60'.

I don't think this is quite noticeable, but the main problem is that the four-wheeled bogies have to be replaced by 6-wheeled bogies, and extensive modifications would probably be necessary.

I am examining this problem with my two diesels of this type at the moment.

PAUL ROGERS.

Doonside, N.S.W.

Sir,

The letter from G.V.H. which appeared in your "Helper Service" re NSWGR rolling stock available to the modeller, prompts me to suggest that he have a shot at scratch building which is not so hard as it may at first appear.

Chris Pratten's article on the building of an M.H.G. van, suggests a good start for any enthusiast wishing to model the N.S.W. scene.

While many scratch builders use sheet brass for construction, and ply as the above mentioned article advocates, I have personally found heavy white card to be very easy to work, and very strong in the finished model.

Unless roofs are dome ended as in a "TAM" sleeper or MHO van I find that card moulds well for this job as well as sides and ends.

As an indication of the strength of card construction, I would mention that while serving in New Guinea in 1943 I found time to construct six O gauge coach bodies in this material, which survived the rigors of mailing home to Sydney and which for some years operated on a garden layout in all weathers. One of these coaches is still in existence after spending some ten years in the bottom of a trunk with other rolling stock packed on top.

In 3mm scale this type of construction has proved just as sound.

Cardboard lends itself to scribing of timber type construction and looks just as effective when representing steel.

I enclose a photo of some of my card stock which may prove of interest.

K. WOODSIDE.

Forbes, N.S.W.

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FELLOWSHIP—with over 14,000 other model railroaders in the United States, Canada and over thirty-five other countries, plain everyday folks just like yourself, whether you are a newsboy, mechanic, bank president, or army officer, a sales clerk or doctor. Our members come from every walk of life, every every race, creed and color. You, as a member, are invited to attend your local Regional meetings, and the National Convention, to talk, visit with your model railroading neighbours and see model railroading.

INFORMATION—through the monthly N.M.R.A. BULLETIN, the periodical issues of the N.M.R.A. DATA SHEETS; the annual PERIODICAL INDEX; the YEARBOOK listing all members of the N.M.R.A., with their addresses and pike details, and other material issued from time to time.

THE A.M.R.M.—Bi-monthly the S.C.R. sends you the "Australasian Model Railroad Magazine", which is the Region's own publication, 20-30 pages, giving you news of Australian and New Zealand Model Railways, articles and the doings of the Australian and New Zealand Railways — plans, how-to-do-it type articles every modeller appreciates — Shop Detective — Photo Section — and other allied information.

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ECONOMY—All this material is provided ALL members, regardless of the class of membership, because most of the work of the N.M.R.A. is done by volunteers; members just like you, who give up part of their hobby time to work on committees for the betterment of the hobby in general.

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Do Not Worry if you cannot answer all these questions.

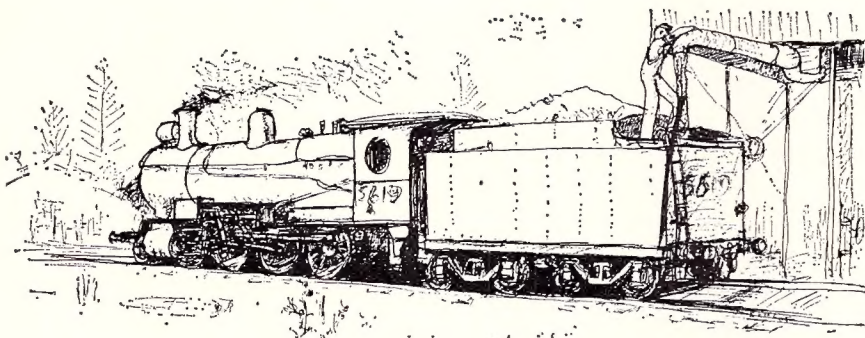
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HELPER SERVICE

Q.: For timetable operation, is there a simple method of making up a 'hot clock'? — B.T.H.

A.: An old pendulum clock lends itself very easily for this conversion, by simply shortening the length of the pendulum. The extent of alteration will be found by experiment, but in all likelihood, you will have to reduce the dead weight of the pendulum bob, and make the escapement shallower, to compensate for the relatively shorter arc of swing. For a spring driven alarm clock, reducing the number of coils in the hair-spring is startlingly effective, and also removing some portion of the metal of the balance wheel; often a combination of these two methods permits an acceptable end result in accuracy. Having so greatly over ridden the original intended effect of the actual regulator on an old alarm clock, do not count on any worthwhile adjustment from the regulator itself.

Alteration of gearing in the wheel train, while technically quite feasible usually leads to wrecking of the clock, due to inadequate equipment, and is not to be recommended. In view of this, mains electric clocks do not lend themselves to hotting, and additionally are an electrical appliance requiring great care for insulation etc.

Q.: What is pulse-power as applied to model railroad loco. control, and what are its advantages and disadvantages? — J.H.

A.: The term pulse power is modellers' jargon for half wave rectification. Half wave current is obtained from standard power packs by utilizing only one half of the negative output of the rectifier. This is achieved by inserting a switch on the rectifier bridge, i.e. breaking or making the wire joining the negative plates.

In one example of power packs, instead of a simple "on and off" switch, a variable resistance is included, and this enables the operator to obtain anything from half to full wave rectification to his choice. (This optional extra is marketed by Messrs. Hammant & Morgan under the name of "Vari-Wave").

The pulsing effects, can, in certain instances, give very rough performances from what are commonly known as 3 pole motors. As the pulse is in effect over 1/3rd of an armature revolution and obviously then, the more poles, and/or slots in an armature commutator assembly, the smoother the pulsing effect.

Pleasant slow running is the anticipated result from pulse power but on occasions quite severe over heating of the motor can occur. The application of modern power transistors to power packs can in many instances give far better results without over heating, and our previous articles on transistor throttles could be studied.

Back copies of the A.M.R.M. at 2/6 each with articles on transistor throttles are available from the Editor; and Nos. 5, 6, & 14 would be the ones for you. Include 5d postage for one copy, 3d for each additional copy.

Q.: Could you advise me on fitting lights to Tri-ang passenger coaches? — E.M.

A.: One method of vehicle lighting is by using high frequency current as fully explained in the A.M.R.M. issue No. 8, page 16. However, this does inevitably involve quite a deal of work in arranging electrical pickup through the wheels of cars, and as Tri-ang have plastic wheels, it might be wiser to consider installing batteries in each car. If you use 3 volt bulbs, with a diffuser, and two Eveready batteries No. 1035 (a fraction over 1½ oz. ea.), this will bring the total weight of the average Tri-ang passenger car in line with N.M.R.A. Recommended Practice for vehicle weight, although the older stock without needle bearings may then prove too much of a load for your locos. on grades.

Q.: What is cab control? — M.B.E.

A.: Cab control is the title given to the facility of being able to control, at will, all or any part of the layout from any given controller. While in itself really only a development of basic track feeding, a great deal of wiring can be necessary, and unless double pole selector switches and/or track occupancy lights are employed, damaging feedbacks and corn field meets can be "enjoyed". There can also be a risk of damage to transformer windings and rectifiers. For a very concise study of Cab Control, the Railway Modeller Booklet of this title (Peco cat. No. P.B. 12 at 1/3 from your hobby dealer) is well worth having, and "101 Track Plans" is also very helpful.

In many cases it is better to have only one controller fully cabbed, and the others kept purely for given duties such as yard switching.

Q.: In spite of what I feel was very careful fitting, I cannot achieve reliable delayed action operation with Kadee M.K.D. couplers. Can you give some help? — S.D.

A.: Presumably you are using the permanent magnet type ramps, and with these it is important to have accurate fitting of the ramps for height, so that all coupler tails may be adjusted to have the least possible air gap over ramps.

This permits maximum influence from the magnetic field/s, and gives optimum deflection of not only the actual knuckle, but the coupler shank as well. Both shanks must deflect over the ramps to obtain the delayed position of the couplers. We know of some instances where operators have changed to the electro magnetic type of ramp (Kadee cat. No. U.E.M. 4) and operated on around 25 volts D.C., to ensure positive deflection.

In some recent deliveries of M.K.D.s the coupler tails require slight adjustment to bring them nearer to track centre, but in doing this, care must be taken to avoid damage to knuckle pivot, shank or draft box. It is essential to locate the ramps on straight track, and to have at least the length of the longest wheelbase likely to operate on that track section, of straight track each side of the ramp. If this precautions is not taken, it is likely that the coupler tail will actually be over centre, due to one end of the vehicle being at an angle to the ramp, and the coupler may deflect to the wrong side.

Q.: I have read and understand thoroughly, the N.M.R.A. Recommended Practice 20.1 covering weighting of rolling stock. I assume that this was prepared for North American "consumption", and therefore may not apply to four wheel type vehicles in OO/HO. Would you comment please? — B.P.L.

A.: Our lengthy experiments have proved that by applying R.P. 20.1 accurately to four wheelers, excellent results are obtained, and derailments are reduced to almost nil (always assuming that wheels etc. are OK). Most Hornby Dublo rolling stock items are virtually correct, most Tri-ang are far too light, and generally Airfix four wheelers such as the cattle wagon, when fitted with metal wheels (say Jackson), require at least 2 oz. of ballast. In R.P. 20.1 it is suggested that the weight be placed equally over the king pins, and for four wheelers we recommend equal division of the weight over each axle, which has the bonus of leaving the floor detail inside the (central) doors clear, on vans.

Q.: Are insulating rail joiners available to suit Tri-ang Super 4 track? — E.C.

A.: As the Tri-ang rail section is .150" high, the standard Code 100 type of rail joiner, Peco S.L.-11, for example, cannot be used. We know of no insulating rail joiner, suitable for hi-rail. Tri-ang do of course have an Isolating Track, cat. no. R497, at 5/6 ea., which includes terminals for connection to an on/off switch, should this be required.

It is possible to saw through the rail sections, and insert a piece of insulating material such as styrene or cardboard, but if you are compelled to take up and relay your track, remember that the snap track section will be very considerably weakened by this cutting.

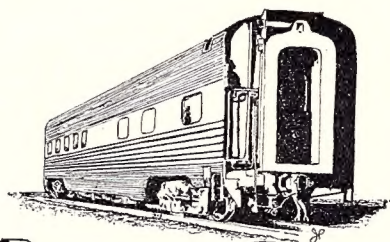
CORRECTION TO INDEX

Readers will notice that the title page of the index is incorrect.

It should read: April/May 1963 — December 1964/January 1965.

A corrected copy is being reprinted and will be used for readers who send in their magazines to be bound by our binding department.

Other readers who desire a copy should forward a 5d postage stamp with their name and address, to "INDEX", S.C.R. Publications, 189 Homer St., Earlwood, N.S.W.



CLUB CAR

To Club Officers: These pages are available for the dissemination of news about your societies. Brief news about activities will be welcome for these pages. Closing date is fifteenth of month prior to month of issue

N.M.R.A. ACTIVITIES Southern Division

The June meeting was held at the home of John Henshaw, and many of the members took the opportunity to closely examine John's HO_{N3} layout. This layout, although not yet completed, is becoming an inspiration to many of us as John has that elusive touch that produces detail without apparent effort. Afterwards there was some discussion about a new club to be formed from our members to build a layout in a clubroom which could be available at reasonable cost. Almost all the members present indicated their interest in the new club.

In July we visited Broadmeadows, this time to the narrow gauge line of Laurie Jackson. One of the items for this meeting was another competition, this time for a caboose, guards van or similar rear end vehicle.

Russ Siddall was the judge (unpaid) and the honours went to Laurie Jackson for a 1/2" scale model of a VR 2'6" gauge guards van. Other entries ranged from a HO drover's caboose to HO_{N3} freelance vehicles. All the entries were of a high standard and indicated a lot of work by our members.

Next competition is for December, this time an open one. What about it fellows, anything goes this time.

Charlie Huggard reported that planning for the convention here in Melbourne next Easter was well in hand. The convention looks like being a beauty, with competitions, clinics and a ride on "Puffing Billy" and visits to layouts. There was also much discussion on correspondence and executive minutes, with all members joining in.

Future Meetings:

11th September — Phil Jeffrey's, 33 McDowell Street, Greensborough.

Programme will be on the December competition.

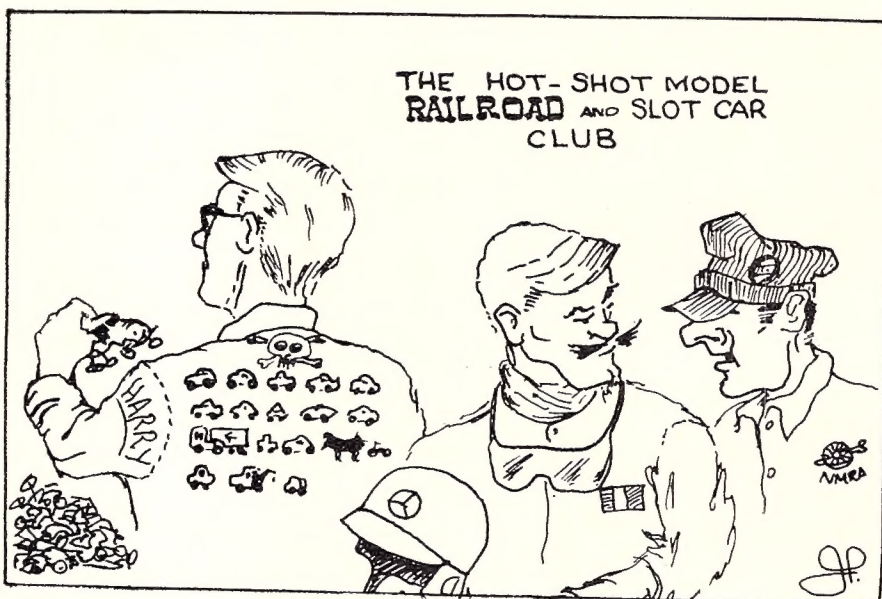
9th October — Stuart Barker's, 19 Cromwell Street, Glen Iris.

14th November — Visit to Diamond Valley Railway, Lower Eltham Park — a live steam layout in the open air.

December — Film night and judging of building competition — date not yet fixed.

Eastern Division

Members are notified that the next meeting will be at the home of Alan Johnston, 33 Bimburra Ave., St. Ives at 2 o'clock on Saturday, 11th September. This will be a working bee to complete the layout for the exhibition at the Syd-



Don't worry about the E-types and Ferraris; just watch out for Harry's F-7 at the level crossings!

ney Town Hall in October. Everyone who can possibly attend is requested to do so. Many hands make light work. N.M.R.A. will be having Stand No. 20 and the layout will probably have running upon it models of New South Wales prototypes, as well as others. Also several transistor throttle controls will be demonstrated, one having been built from a recent article in this magazine. As preparations for this exhibition layout will cost something it would be appreciated if metropolitan members at least could offer donations to defray expenses.

Other meetings: October 9th — Basil Hammersley, 56 Edgbaston Road, Beverly Hills; November 13th — John Wheeler, 80 Carrington Street, Wahroonga.

Sunshine State Division (Queensland)

Division meet every month on the second Saturday of the month. Future dates to remember:

September 11: Meeting at Trocadero Building, Melbourne Street, South Brisbane (opposite South Brisbane Railway Station), starts 2 p.m.

October 9: Meeting at Dan Sheehan's, 68 Mearns Street, Fairfield, Brisbane. Operating layout, HO/HO_{N3}½. Starts 2 p.m.

Membership inquiries should be directed to:

Division Representative: D. Sheehan, 68 Mearns St., Fairfield, Brisbane.

Division Secretary: G. Gilby, 33 Paragon St., Yeerongpilly.

Division Treasurer: A. Rowe, Flat 4, 8 Norwood St., Toowong.

OTHER CLUBS

THE SOUTH AUSTRALIAN RAILWAY MODELERS ASSOCIATION. Secretary: T. D. Carter, 7 Eurimbla St., Parafield Gardens. South Aust.

All correspondence to be submitted to Secretary. Club activities coming up shortly: Visits to Railway and non railway installations. Club meetings held at clubrooms, situated at the Railway Institute on Second Wednesday of every month. Informative meetings include slides, films, lectures, competitions, and running.

CENTRAL COAST MODEL RAILROAD CLUB.

Secretary: L. H. Dodds, 4 Adelaide St., East Gosford, N.S.W.

Harry Doherty has been elected president of the club. This was at the third annual meeting of the club with 21 members in attendance.

Vice presidents elected for the coming year are Bill Hukel, of Kincumber, Harry Gibson, of Umina, and Ron Dawe, of Gosford.

Len Dodds was re-elected secretary and the same with the position of treasurer held last year by Frank Moore. Bill Cleary was appointed librarian.

New committee members are Merv Harris, of Point Clare, and Ron Warr, of Umina. Patron to the club is Dr. B.M. Dwyer, who was elected unopposed.

In a report from the secretary, it was shown that during the year the Model Railway Club has not hidden behind closed doors.

It has exhibited no less than nine times at various functions in the district. Exhibitions by the club were also held in the Lower Town Hall, Sydney, for three days and nights.

Members were able to view various films on world railways three nights during the year. Through these efforts by the club, many friendships were strengthened. Many little bits of information and solutions to technical problems were gained by members in one way or the other.

The Club exhibited at Gosford Primary School on August 7 and about 450 people saw the exhibit. This was the first public showing of the junior layout and with one of the member's layouts alongside it, some 15 ft. x 4 ft. area of model track and scenery was on display.

The club has had a welcome visitor with new ideas and friendly advice in Kevin Ryan, who has come to work in Gosford on the staff of the Commercial Bank of Sydney. Kevin is an ardent model railway fan and a member of the N.M.R.A. Southern Cross Region.

Work is progressing well with the large club layout in readiness for the Gosford Show.

(Continued P. 25)



NOTES OF THE SYDNEY MODEL RAILWAY SOCIETY

PRESIDENT'S REPORT

29th Annual General Meeting, 19th July, 1965

Held on 14th December, 1964, the Christmas night consisted of a film night. The films obtained and shown were of the British Railways entitled: "The Blue Pullman", "The Signal Engineer" and "The 3rd and 4th Report on Modernisation"; all films were in colour with sound. The evening was well attended with a total of 41 persons, including members and their friends and visiting officers and members of kindred societies.

Thanks go to those members who took an active part in the arrangements of the evening also to John Bowen and Lionel Glendenning who supplied the soft drinks for the supper that followed.

As at this meeting the society has 54 names on the book with 37 financial members. Those members who may have had a lapse of memory should contact the Treasurer as soon as possible. Since the last General Annual Meeting we have had two new members: Arthur Hall, Oyster Bay, 'O' gauge, Neil Taylor, Marrickville, 'HO' gauge. To these members we convey a most warm greeting.

On and from 'C' day 14th February, 1966 the subscription rates will be \$4.00 for Metropolitan membership and \$1.60 for Country membership. From this date onwards membership cards will be introduced in lieu of receipts, the cards should be signed by the member and kept for the year applicable.

My thanks go to the Treasurer Ken Smith for his efforts during the past 12 months in the handling of the society's finance, also to Secretary John Bowen for the handling of the society's correspondence and the 'O' gauge bulletin notes together with Lionel Glendenning for the 'HO' notes that arise from the 'HO' members.

The new diagram for Junction 'O' gauge layout was finally installed and although it is not working at this stage, as Stage I

is not yet completed, but, when finished, the diagram will indicate the position of all trains under the control of 'Junction' signalman. For work done so far thanks go to John Alexander and Don Stone for the diagram, construction and wiring of Junction to date.

Seven 'O' gauge members and friends attended a theatre night run by the N.S.W.R.T.M. The evening was enjoyable as the film was called "The Train" and centred around the French Railway during the German occupation. We shall look forward to when the A.R.H.S. plan their theatre night of a forthcoming train film and this society participating with them.

Train Running Committees: The 'O' gauge committee consisted of Chairman: Don Stone (owing to resignation from the position of Ron Golten), Committee-men: John Alexander, Jack Fitzpatrick (who has since moved to Tamworth). 'HO' gauge committee consisting of: Chairman: Lionel Glendenning; Committee: Frank Maxwell, Maskell Bourke. To these members I extend my thanks for the manner in which they carried out their duties during the year.

The A.M.R.A. Model Railway Exhibition will again be held in the Sydney Lower Town Hall on the October Holiday weekend. All members who wish to exhibit their models will find that a larger static display stand will be available. This year will also feature two 'O' gauge layouts, most models can be run on these, as one is for two or three rail operation and the other will be for 3-rail; for further information see Norm Read.

P. E. SIMPSON,
President.

CLUB "O" GAUGE NEWS

Not a great deal has happened on 'O' gauge in the last few weeks except that Junction track diagram board has been installed and now awaits to be wired up. This diagram is styled after the latest type of board as used in N.S.W.G.R. signal boxes. Box was made by Don Stone and drawn by John Alexander who is also doing the wiring up.

There is movement for the extension of No. 2 siding at Medway to a place under goods for either a loop or terminus so as to give better running on the Medway branch.

John Bowen had in his new Santa-Fe 2-8-2 loco painted black together with a train of American Box Cars and Caboose. Norm Read also has his latest loco, a three truck Shay. This is quite a beautiful loco, with two speeds and the three vertical cylinders that really work.

Bill Parker, country member from Grafton, was in to give his 48 class diesel loco a run and is now in shops for final fitting up and painting. It is efforts like this, when a member brings in something new, which bring a new interest to the hobby. Let's see more of it.

Treasurer's Report may be seen upon request to the Secretary, John Bowen. We had one new member elected this night, John Robert Carter, 'HO' of Hurstville.

The committee was re-elected for the ensuing term of 12 months with Barry Millner filling the new position of assistant librarian.

HO ACTIVITIES

We have a good welcome to Bob Kollwyn who has been absent for a while. He

placed his 2-10-2 No. 3802 A.T. & S.F. into the layout loco roster. A mighty big piece of loco, Bob, and was seen working a lot of trains on the layout during the evening. Frank Shennen also put his latest loco into the layout loco roster for running. It was a 0-8-0 Rock Island prototype adopted from the U.S.R.A. design, Class S-57 No. 300-9. They were among the most powerful of their type. Recreated by Tenshodo shops, they have terrific detail and look handsome and modern, they are an outstanding addition to anybody's layout and loco roster. Also Frank had a new low profile S.D.24 diesel which has been repainted in tuscan red body and black under frame.

Lee Gallway had a track cleaning car on the layout to clean the track in the tunnels. It was pulled by a 2-8-0 MA & PA vintage engine and at the rear was a red caboose. Dennis Sheering had a nice assortment of American freight rolling stock which was used to the full on freight working. May 3rd was devoted to fixing the layout faults which are an ever occurring thing. The goods yard control board had fallen apart and was put together with the help of Gordon Skeets; Ken Smith fixed the lack of power in the scissors crossing at Central with the help of Dennis Sheering.

Arthur Wheatley was busy down at Wits End and, with the help also of Frank Shennen, found the fault of a few bugs in that section of the layout. HO member Frank Shennen had the story of his Railway Empire in the April issue Model Railway News, an English magazine which described his layout fully. The photos were taken by John Glastonbury, a fellow member.

We have all felt the absence of Maskell Burke who is in the South Sydney Hospital after an operation and we all wish him a speedy recovery and we look forward to his cheerful presence in the club soon. Things have been pretty quiet with cold weather and rain. I guess T.V. and log fires are favorites at the moment, but the regulars still turn up cold, wet or fine. Arthur Wheatley showed us how his A.D.60 Garratt was progressing and we were all interested to see all the exact detail that has been put on the basic boiler, cab and tender. Keep up the good work and we will look forward to when it will have steam up and is waiting for the green light.

Frank Shennen had his Budd car on the tracks for a run. It has an all metal body and has been painted tuscan red. Maskell Burke is back with us again after his stay in hospital and he showed us that he has not been an armchair model railroader while he has been absent. He put on the H.O. tracks a string of four wheel milk wagons and a free-lance workshop wagon with a NSWGR's S.H.G. guards van thrown in for luck. Good on you Max.

Welcome to the "H.O." Running Committee Bill Gallaway. One of his first jobs was drawing up the new roster for operating the layout. It has been decided to include the regular attending members on the roster with the members who drop in now and again going on the reserve list. The regular members will stand down for members on the reserve list when they attend. One of the rules is that they have rolling stock to run on the layout. Also this rolling stock must have "Manua" couplers at least on both ends of a complete train or a number of rolling stock. Advice on how to fit 'Manua' couplers can be had from "H.O." member Ken Smith.

CLUB CAR (Cont.)

FORBES MODEL RAILWAY CLUB. Hon. Sec.: K. Woodside, 64 Hill St., Forbes, N.S.W.

This club was formed nearly five years ago, and for the past three has been engaged in the construction of a 24' x 9' HO layout to N.M.R.A. standards.

Owing to the club's premises recently being demolished it has been necessary to move to a new site, where intensive activity is fast pulling things into shape once again.

Layout is in the form of a two level figure 8 featuring two main stations and yards with one smaller through station.

Some 40 points have been custom built by two of our members using code 100 rail. The power throws are activated by ex telephone bell relays.

With the addition of three new members in the last month the club's active membership stands at 12.

It is hoped to give our first exhibition at the Forbes show early September.

Any enthusiast visiting Forbes will be made welcome.

Z19 0-6-0 TENDER LOCOMOTIVE OF THE N.S.W.G.R.

by PAUL ROGERS & HOWARD G. ARMSTRONG

Originally built in 1877 as A/93 class goods locomotive, the Z19 (1924 reclassification of class). 0-6-0 tender loco pioneered the goods services of the N.S.W.G.R. The 77 units of the class were manufactured by Beyer-Peacock of Manchester, England, although 18 were built locally in N.S.W.

The class is the oldest goods locomotive still in regular use in N.S.W., and shares its antiquity with the 1877 designed Z12 4-4-0 Passenger locomotives, a few of which are also still in service. The Z19's hauled all the heavy goods trains for over twenty years at a time when the railway network in New South Wales was being rapidly extended throughout the state.

In 1896, upon introduction of the 2-8-0-T-524 (D50) class Standard Goods engines, the class was transferred to mixed traffic working and many soon found work on the lighter secondary branch lines, both on mixed and goods trains. They were found to be ideal for this work, and to this day, the remainder of the class, totalling about 20 in all, are still employed in this work, although one or two are to be found around Eveleigh workshop shunting goods and passenger rolling stock.

The Z19 locos were one of the first in New South Wales to be fitted with air-brakes and full screw-coupling drawgear when built. Previously couplings had consisted of chain links threaded together, but in 1875 the first chain couplings with draw-hooks appeared in England, and soon found their way out to Australia.

Scrapping has reduced their numbers, and only a few remain, but those few stand as a living monument to an effective locomotive design almost a century old, which is still operational in this modern diesel era.

Technical details: as follows:—
Original Numbers:— A/93-169. 1924 Re-numbered 1901-1977. 14 converted to Z20 A/E class 2-6-4 Tank Class in 1902 to bring total of Z20 class tanks to 21 altogether (7 built as new). Number of Z19 locos converted to Z20 class locos remained the same:— i.e.: 1929 became 2029.

Wheel arrangements: 0-6-0 with 6-wheeled tenders.

Cylinders: Two, Stroke:—18" x 24".

Driving wheels: 4'0½" diameter.
Tender wheels: 3'0" diameter.
Boiler pressure: 150lbs. per square inch.

Tractive Effort: 19,220 lbs.
Weight in steam: 60 tons 1 cwt.
Weight (Empty): 55 tons 11cwt.
Water capacity: 2000 imp. gallons.
Coal capacity: 4½ tons approx.
Firebox grate: 17.9 square feet.

Boiler Heating Surfaces:—

Firebox: 90.38 sq. ft.

Tubes: 1231.80 sq. ft.

Total: 1322.18 sq. ft.

Built by Beyer Peacock, Manchester, England 59

Built by 'Vales, New South Wales, Australia 18

TOTAL: 77

Nos. of locomotives still (1965) in service:— 1901, 1903, 1904, 1905, 1912, 2010, 1915, 1916, 1919, 1923, 1925, 2029, 1938, 1940, 1941, 1942, 1945, 1946, 1948, 1952, 1954, 1955, 1957, 1959.

VISIT STAND 15 AT THE M. R. EXHIBITION

to be held at

SYDNEY LOWER TOWN HALL

on Friday, October 1 Saturday, October 2 and Monday, October 4. This will be your chance to meet the Editor and the members of his staff who would welcome your ideas for future issues of the magazine.

Back Numbers will be on sale throughout the Exhibition.

